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ABSTRACT

This proceedings contains 25 papers, the conference agenda, and summaries of other presentations of a 1989 conference on student financial aid. The following papers are included: "Minorities in Higher education in the 1970s and 1980s-What the Current Population Surveys Tell Us" (Paul M. Siegel); "Estimating Minority Participation in College: Problems and Prospects" (Michael L. Tierney); "Post-High School Plans and Aspirations of Black and White High School Graduates:" What Has Changed Since the Mid-1970s?" (Robert M. Hauser); "Vanishing Dreams: The Growing Economic Plight of America's Young Families" (Clifford M. Johnson); "Family Income and Student Financial Aid Eligibility" (Thomas G. Mortenson); "Why Can't We Agree On What's Happened to U.S. Living Standards? Income and Wealth Trends Among the Middle Class" (Richard C. Michel); "Income Distribution of New Jersey Families with Children in College, 1977-1986: Data from State Income Tax Returns" (Lutz K. Berkner); "The NASFAA Rapid Survey Network" (Karl Knapp); "Outreach Programs in Texas" (Jane Caldwell); "Guaranteed Student Loan Indebtedness: Its Influence on Undergraduate Student Decision-Making At Virginia Commonwealth University" (Alice E. Presson); "Development of the Pell Grant Pre-Established Criteria" (Pedro J. Saavedra); "Corporate Support for Scholarships: A Tale of Two Cities" (Joseph M. Cronin); "Report on Early Awareness" (Ernest T. Freeman); "The Effectiveness of Early Awareness Program Information" (Jerry S. Davis); "National Service and Student Aid" (Patricia Smith); "Further Exploration of the Distribution of Higher Education Subsidies" (John B. Lee, Marilyn Sango-Jordan); "Student Financial Aid as a Method of Cost Sharing at Private Colleges" (Donald L. Basch); "A Policy Analysis Study of Tuition Pricing At the State University of New York": (Arlene Olinsky); "Financing the Cost of Attendance: How Much Do Students Pay?" (Patricia S. Grimes, Gregory E. McAvoy); "Characteristics of Stafford Loan Program Defaulters: A National Study" (Gary F. Beanblossom, Blanca Rosa Rodriquez); "Student Borrowers and Education Debt Burdens" (Laura L. Greene); "Some New Evidence on the Determinants of Student Loan Default" (Saul Schwartz, Sandra Baum); "Independent Students: Analysis of the Changes in Definition" (John B. Lee, M. Nadir Atash); "Financial Aid as a Factor in Hispanic Students' College Attendance: What Can Be Said From the National Postsecondary Student Aid Study?" (Gwendolyn L. Lewis); "Results from the New York State Augmentation of the 1986-87 National Postsecondary Student Aid Study" (Thomas J. McCord, Glenwood L. Rowse, Nancy Willie-Schiff). Includes a roster of conference participants. (JB)

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for the

Sixth Annual Conference of the NASSGP/NCHELP Research Network

Washington, DC

June 7-9, 1989

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PROCEEDINGS

FOR THE

SIXTH ANNUAL CONFERENCE OF THE NASSGP/NCHELP RESEARCH NETWORK

Washington, DC

June 7-9, 1989

January, 1990

PENNSYLVANIA HIGHER EDUCATION ASSISTANCE AGENCY
PHEAA 25 YEARS 1964-1989 STUDENT AID SERVICES

660 BOAS STREET
HARRISBURG, PENNSYLVANIA 17102-1398

Editor's Remarks

This document contains copies of papers and/or speeches given at the Sixth Annual Conference of the Research Network of the National Association of State Scholarship and Grant Programs and the National Council of Higher Education Loan Programs. The conference was held June 7 through June 9, 1989, at the Embassy Suites Hotel in Washington, DC. The NASSGP/NCHELP Research Network is an association of researchers, policy analysts, planners, administrators and others employed by NASSGP and NCHELP member organizations, federal agencies, the United States Congress, colleges and universities, educational associations and other organizations.

Network members have in common a great interest in research, policy analysis, and formal and informal investigation of the distribution of all types of student financial aid; the effects of financial aid and other factors on student access, choice and retention; financing higher education, and related topics. Network membership is voluntary and open to anyone with an interest in these topics. Information on the membership and becoming a member may be obtained by writing or phoning this editor at PHEAA, at 717-257-2794.

The Network's major activity is an annual three-day conference giving members and others the opportunity to meet and exchange information on various topics of mutual interest. These events are planned by members of the NASSGP Research Committee and other volunteers interested in participating in the planning process. Anyone may volunteer to participate in conference planning--or any other Network activity.

This document represents, as completely as possible, a printed compilation of the formal events at the sixth conference, in the order they appeared on the agenda. Summaries of presentations not supported by written documents are included. The conference Agenda appears on the next pages, followed by an abbreviated Table of Contents.

The papers were duplicated as received from individual presenters during and after the conference. Assembling, formatting and printing all papers in a common format would have been beyond the financial and temporal resources available to the Network.

It is sincerely hoped that this document is useful to those who attended the conference and to others who have an interest in topics that were discussed. On behalf on the NASSGP Research Committe, members of the conference planning committee, and Network members, the editor wishes to thank the presenters for their valuable contributions to the conference and this document. PHEAA's financial support for the printing and distribution of the Proceedings is gratefully acknowledged.

Jerry S. Davis
Director of Research
and Policy Analysis

January, 1990

AGENDA

SIXTH ANNUAL NASSGP/NCHELP RESEARCH NETWORK CONFERENCE
WASHINGTON, DC

Wednesday, June 7

9:00 a.m. to noon	Conference Registration
10:00 a.m.	Minority Participation in Higher Education
	"Minorities in Higher Education in the 1970's and 1980's --What the Current Population Survey Tells Us" Paul M. Siegel, Bureau of the Census
	"Estimating Minority Participation in College: Problems and Prospects" Michael L. Tierney, University of Pennsylvania
	"Minority Attitudes Toward Higher Education" Robert M. Hauser, University of Wisconsin
	Moderator: Thomas Mortenson, American College Testing Program
12:00 p.m.	Luncheon in the Atrium
1:00 p.m.	Income Distributions and Access
	"Vanishing Dreams: The Growing Economic Plight of America's Young Families" Clifford M. Johnson, Children's Defense Fund
	"Changing Family Incomes and Their Effects on Family Abilities to Finance Higher Education from Their Own Resources" Thomas Mortenson, American College Testing Program
	"Income and Wealth Trends Among the Middle Class" Richard Michel, Urban Institute
	"The Changing Income Distribution of New Jersey Families With Children in College, From 1976 to 1986" Lutz Berkner, New Jersey Department of Higher Education
	Moderator: Jerry S. Davis, Pennsylvania Higher Education Assistance Agency
3:00 p.m.	Refreshment Break

(over)

3:30 p.m.
to 5:00 p.m.

Research Forum
Brief presentations on a variety of topics, including:

"The NASFAA Rapid Survey Network"
Karl Knapp, NASFAA

"Outreach Programs in Texas"
Jane Caldwell, Texas Higher Education Coordinating Board

"The Influence of Debt Level on Student Decisions"
Alice Presson, Virginia Commonwealth University

"The Development of the Pell Grant Pre-Established Criteria"
Pedro Saavedra, Macro Systems

...and discussion

Moderator: Gerald Setter, Minnesota Higher Education Coordinating Board

6:00 p.m. Reception and Cocktail Hour

Thursday, June 8

8:30 a.m. "Early Awareness" Programs in Secondary Schools

"A Tale of Two Cities"
Joseph Cronin, Massachusetts Higher Education Assistance Corporation

"Evaluating Early Awareness Program Results"
Ted Freeman, The Education Resources Institute

"The Effectiveness of Early Awareness Program Information"
Jerry S. Davis, Pennsylvania Higher Education Assistance Agency

Moderator: Tim Christensen, NASFAA

10:00 a.m. Refreshment Break

10:30 a.m. Rising College Costs

"Why Are College Charges Increasing So Fast?"
Arthur Hauptman, Consultant, ACE

Comments:

Julianne S. Thrift, National Institute of Independent Colleges and Universities

Carol Frances, Consultant

Moderator: Marilyn Pedalino, Massachusetts Higher Education Assistance Corporation

11:30 a.m.	National Service Proposals "National Service and Student Aid" Patricia Smith, American Council on Education
12:00 p.m.	Lunch in the Atrium
1:00 p.m.	Higher Education Subsidies and Net Costs to Students "Further Exploration of the Distribution of Higher Education Subsidies" Marilyn Sango-Jordan, JBL Associates "Student Financial Aid As a Method of Cost Sharing at Private Colleges" Donald L. Basch, Simmons College "A Policy Analysis Study of Tuition Pricing at the State University of New York" Arlene Olinsky, New York State Higher Services Corp. "Financing the Cost of Attendance: How Much Do Students Pay?" Tricia Grimes and Gregory McAvoy, Minnesota Higher Education Coordinating Board Moderator: John Curtice, State University of New York
3:00 p.m.	Refreshment Break
3:30 p.m. to 5.00 p.m.	Student Loan Repayment Studies "Characteristics of Stafford Loan Program Defaulters: A National Sample" Garry Beanblossom and Blanca Rosa Rodriguez U. S. Department of Education "Student Loan Debt Burdens and Repayment Patterns" Laura L. Greene, Pennsylvania Higher Education Assistance Agency "New Evidence on the Determinants of Student Loan Defaults" Saul Schwartz, Tufts University Sandra Baum, Skidmore College Moderator: Jamie Merisotis, Consultant

(over)

Friday, June 9

8:30 a.m.

Research Using the 1986-87 National Postsecondary Student Aid study NPSAS) Data Base

"Independent Students: Characteristics and Sources of Aid"
John B. Lee, JBL Associates

"Financial Aid as a Factor in Hispanic Students' College Attendance"
Gwendolyn Lewis, The College Board

"Results From New York State's Augmentation of the NPSAS Data"
Thomas McCord, Glenwood Rowse and Nancy Willie-Schiff
New York State Education Department

Moderator: Marilyn Sango-Jordan, JBL Associates

10:00 a.m.

Refreshment Break

10:30 a.m.
to noon

Demonstration of NPSAS Data Analysis on a Personal Computer

C. Dennis Carroll, Paula Knepper, Carl Schmitt
National Center for Education Statistics

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ABSTRACT

Paul M. Siegel, U. S. Bureau of the Census, "Minorities in Higher Education in the 1970s and 1980s--What the Current Population Surveys Tell Us."

Dr. Siegel demonstrated that there was a major increase in college access for Black Americans until 1977, but argued that since then there has been stability, rather than decline, in their participation rates. There is an apparency of decline because of the increasing disparity between participation rates of Black and White Americans. The participation rates for Whites have increased, while those for Blacks have remained relatively constant.

ABSTRACT

Michael L. Tierney, University of Pennsylvania, "Estimating Minority Participation in College: Problems and Prospects."

Dr. Tierney agreed with Dr. Siegel that there was a real increase in college access for Black Americans between 1975 and 1977. He suggested that the mid-seventies appear to have been unique years for access of Blacks to higher education. He speculated that this could have been due to general widespread unemployment in the economy which led to the substitution of financial aid to attend postsecondary education for unemployment benefits. Tierney argued that when the size of the sampling errors in the Current Population Survey data are considered, the data show no significant change in Black enrollment trends except for the 1975 to 1977 period. He attributed the relative stability of college enrollments during the 1980s, in the face of declining numbers of high school graduates, to increases in participation rates among White students.

Post-High School Plans and Aspirations of Black and White High School Graduates: What Has Changed Since the Mid-1970s?

Robert M. Hauser and Douglas K. Anderson

ABSTRACT

For the past decade, the post-high school plans and aspirations of black and white high school seniors have been recorded annually in a large, national sample survey, Monitoring the Future, carried out by the Survey Research Center of The University of Michigan. These series are of great interest because the chances of college entry have declined among blacks from 1977 through the mid-1980s, both absolutely and relative to the increasing college entry chances of whites.

The main finding of the present analysis is that plans of black and white seniors have followed similar paths in time. There have been essentially no trends among blacks or whites in plans to attend technical or vocational school or in plans or aspirations to complete a two-year college program. Plans and aspirations to enter the armed forces have increased among blacks and whites, and the increase in plans has been slightly larger among blacks than among whites. Plans and aspirations to complete a four-year college program have grown among blacks and whites, and the increase in plans has been slightly smaller among blacks than among whites.

However, this aggregate picture of similar trends among blacks and whites is altered, substantially, when we control changes over time in the social background composition of black and white cohorts. For example, in the case of college plans and aspirations, it appears that the upward trends among blacks, but not among whites, were driven by favorable changes in the social background of black cohorts. That is, among blacks, but not among whites, the upward trends in college plans and aspirations disappear when social background is controlled. Moreover, the favorable effects of background changes belie claims that increased high school graduation rates among blacks should "naturally" reduce continuation to college - because of less stringent selection.

All the same, these findings provide little evidence of a change in values or motivation among black seniors that would be sufficient to account for a decline in their chances of college entry. It will be important to check findings of declining college entry by examining lagged trends in college graduation among blacks and whites. In seeking to locate the sources of trends in black college entry, the findings suggest that we ought to look more closely at patterns of entry into military service, at changes in the labor market for recent high school graduates, and at the availability of direct grants to support college attendance.

From the middle 1970s to the early 1980s, college entry of blacks has declined, even as it has grown rapidly in the white population.[2] Despite flaws in the evidence, the decline is well documented, and attention has turned to a search for explanations of the decline and for ways to reverse it. This report is one piece of our effort to document and explain the changes in black college entry. It briefly describes the turnaround in black college entry, and it describes several time series of post-high school plans and aspirations that cover the period of the turnaround. There is very weak evidence that aggregate changes in black students' plans and aspirations correspond to observed changes in their chances of college entry. The main finding is that, in the aggregate, plans of black and white seniors have followed similar paths in time that have included stable or declining interest in technical or vocational schooling and two-year college programs and growing interest in military service and in four-year college programs.

Changes in College Entry

In Hauser's (1987) recent examination of trends in college entry, there were four major findings:

> First, college entry rates have declined among black high school graduates. Even though there have been some signs of recovery in the mid-1980s, blacks have fallen further behind whites than they were in the late 1960s. The chances of black high school graduates to attend college rose from about 39 percent in 1973 to about 48 percent in 1977 - when they were virtually

equal to those of whites - and then fell continuously to about 38 percent through 1983.

Second, the picture looks worse when one compares the college entry chances of black high school graduates with those of white high school graduates; over the period from 1973 to 1984, the college entry chances of whites rose almost continuously from about 48 percent to 57 percent. College entry rates rose most rapidly among whites after 1979, when blacks had experienced a severe drop in their chances of entering college. By 1984, the odds that a black high school graduate would enter the first year of college within a year were less than half the corresponding odds for a white high school graduate.

Third, the lower incomes of black families explain part of the black-white gap in college entry, and during the 1970s black high school graduates were more likely to enter college than white graduates with the same family income. However, since 1980, the college entry chances of blacks have fallen so far that family income can no longer account for the black-white difference.

Fourth, these trends affected black men and black women, and they affected most income groups in the black population. That is, the rise and decline of blacks' chances for college entry, absolutely and

> relative to those of whites, have essentially nothing to do with changes in family income or with changes in the college-going chances of men and women. Only the very highest income families in the black population experienced any improvement in college-going chances after 1980, and even this group lost ground relative to whites.

Figure 1 and figure 2 show the central findings of Hauser's previous report. They are based on tabulations of individual-level data for recent high school graduates from October Current Population Surveys for 1968 to 1985. The October CPS data cover the civilian noninstitutional population, so high school graduates who entered military service are not in the base population.

Figure 1 shows trends in the logit of college entry among black and white high school graduates. (The logit is the natural logarithm of the ratio of the percentage entering college to the percentage not entering college.) The trend lines have been adjusted for effects of family income, sex, region, and metropolitan location on college entry; however, the trends are essentially the same for blacks and whites, whether or not family income and the other variables have been controlled. As shown, the trend lines pertain to male graduates with family incomes of less than $10,000 from Central Cities in the South.[3] Because of the small number of black graduates in the Current Population

Survey, the trends shown are 3-year moving averages over the period from 1968 to 1985.

Among blacks and whites, the odds of college entry declined from the late 1960s to the early 1970s. After 1973 college entry chances rose, especially among blacks, for whom they peaked in 1977. Among whites college entry leveled off between 1975 and 1979, but it has risen continuously since then. Among blacks, a precipitous decline in college entry began in 1978. It appears to have levelled off after 1981 with black college chances lower than they were in the late 1960s.

One might think that the peak of college entry in the 1970s was abnormally high, given the other social and economic conditions of black Americans. Perhaps it was a temporary product of an unusual level of public support and enthusiasm, which may even have drawn an unusual number of college entrants who were unlikely to earn a degree.[4] At the same time, it is difficult to imagine that the "normal" level of continuation from high school to college among blacks in the 1980s should be lower than that in the 1960s.

Of course, the selectivity of high school graduation itself deserves to be considered as a possible source of decline in college entry. There is evidence that rates of high school completion have continued to increase among blacks during the 1970s and 1980s. As the selectivity of high school graduation declines, one might argue that continuation to college should decline. Yet, selectivity seems an unlikely source of declining college entry; there is no historic evidence for cohorts, black or white, that would suggest a negative correlation between rates of high school completion and rates of continuation to college (Hauser 1986:Figures 20-22). On the contrary, intercohort growth in college graduation has been driven by a combination of increased rates of high school completion and stable or slightly increasing rates of continuation to college. Moreover, as Hauser has already mentioned, the social background of black high school graduation cohorts has actually become more favorable to college entry during this period.

In figure 2, the lower trend line shows a 3-year moving average of the natural log of the ratio of the odds of college entry among blacks to the odds of college entry among whites. This measure has a natural point of equality, shown near the top of the graph, where the log of the odds-ratio is zero. At this point, the odds of college entry among blacks, as given by the ratio of entrants to non-entrants, are equal to the odds of college entry among whites.[5] There has been a long swing from the late 1960s to the middle 1980s, during which the college-going chances of black high school graduates first moved toward those of whites and then diverged, perhaps to a point more distant than in the late 1960s: In 1984, the odds that a black high school graduate would enter the first year of college within a year were less than half the corresponding odds for a white high school graduate.[6]

The upper trend line in figure 2, denoted "adjusted" in the legend, is a comparable measure of difference in the chances of college entry, but it is based upon a statistical model in which the effects of sex, region, metropolitan status, and family income have been controlled.[7] That is, the upper trend line controls for differences between blacks and whites and changes in the sex composition, geographic location, and economic standing of blacks and whites.[8] Two features of the diagram stand out. First, the two lines are virtually parallel throughout the period from 1969 to 1984.[9] Thus, the observed trend in black-white differences in college entry is in no way a consequence of changes in sex composition, geographic location, or economic standing. Second, the adjusted trend line always lies above the observed line. That is, once we take account of the differing social composition of the black and white populations (on the variables included in the model), the differences in chances of college entry are more nearly centered around the zero point of equal chances, which is shown about two thirds of the way up the diagram. In the observed data, the chances for college entry of blacks barely reach the point of equality in the period around 1977; in the adjusted series, the chances for college entry among blacks were as good or better than those among whites almost continuously from 1971 to 1981. By 1982, the decline of the Carter and Reagan eras again brought the chances of blacks below those of comparable whites.

Figures 1 and 2 outline a genuine scientific puzzle that is also of great public interest. What global social changes have affected the college-going behavior of black high school graduates without equally affecting those of whites? Several explanations have been offered for the downturn in black college attendance, including changes in the economic status of blacks families, changes in the propensity of boys and girls to attend college, changes in propensities to enter military service, changes in the level and pattern of financial aid for college attendance, and changes in the attractiveness of vocational or technical education and labor market entry.

The data in figures 1 and 2 show that changes in economic status do not account for the trend in college entry among blacks, nor for the trend in black-white differences in college entry. Hauser (1987) shows that similar trends hold separately for men and for women, so changes in the tendency of black or white men or women to enter college do not account for the downturn in college entry among blacks. In our work in progress, we have found that similar trends appear during the first two years after high school graduation and in entry to two year and to four year institutions. Moreover, the fact that similar trends have occurred among men and women suggests that changes in entry into the armed forces are unlikely to account for the downturn in black college entry.

Post-High School Plans and Aspirations

Have there been changes in black high school graduates' plans or aspirations that might help to explain the change in black college entry? There are good reasons to think that periodic measurements of youths' plans and aspirations will provide useful and valid clues about their social and economic futures. For many years, William H. Sewell, Robert M. Hauser, and others have worked to develop and test a social psychological model of the formation and effects of late adolescent aspirations and expectations (Sewell 1971; Sewell and Hauser 1972; Hauser 1973; Sewell and Hauser 1975; Sewell, Hauser, and Wolf 1980; Hauser, Tsai, and Sewell 1983). Briefly, this model postulates that socioeconomic background and ability affect aspirations for schooling and careers by way of their realization in school performance and in social support from significant others. Consequently, much of the influence of these prior variables on post-high school education, occupational success, and earnings is mediated by plans and aspirations, which account for much of the variation in post-school success. For example, when variables are corrected for errors of measurement, the social psychological model accounts for 68.6 percent of the variance in post-high school educational attainment in a large cohort of Wisconsin high school graduates (Hauser, Tsai, and Sewell 1983:31).[10] If data on adolescent aspirations or plans have not been much used in studies of trends in schooling, it is primarily because we have lacked comparable periodic measurements of them.

Monitoring the Future

Fortunately, we do have one major survey resource, the series of Monitoring the Future (MTF) surveys (Bachman, Johnston, and O'Malley 1980), which has measured the post-high school plans and aspirations of high school seniors using exactly the same questions each year since 1975.[11] These surveys ask about plans and desires to attend several types of schools and to enter military service; unfortunately, they do not ask any questions about immediate post-high school labor market entry. The MTF surveys, conducted by the Survey Research Center of the Institute for Social Research at the University of Michigan, are based upon a nationally representative sample of some 15,000 to 19,000 high school seniors each year in approximately 125 public and private high schools in the coterminous United States. The sampling design is rather inefficient for cross-sectional analyses, but more powerful for trend comparisons.

In this report, we have looked at two series of questions from the MTF that ask about post-high school expectations (plans after high school graduation) and post-high school aspirations (desired post-high school activities). Aspirations and expectations were ascertained in exactly the same way each year with respect to attendance at technical or vocational school, entry into military service, completion of a 2-year college program, and completion of a 4-year college program. We have looked at aggregate trend in the choice of each activity for blacks and whites, and we have compared the trend in choices between blacks and whites. Table 1 summarizes our findings about aggregate trend.

Black Students' Plans: An Overview

Throughout the decade from 1976 to 1985, the percentage of black seniors with definite plans to attend a technical or vocational school fluctuated between 10 and 13 percent, while the percentage with definite or probable intentions fluctuated between 35 and 40 percent. There is little indication of trend in this series, and certainly no suggestion that black seniors' plans for post-high school technical or vocational training have increased. If there is a trend at all, it is one of decline in plans to attend technical or vocational school.[12]

There is clear evidence of increasing interest in military service throughout the decade. Plans to enter military service were least popular in 1977, when 8.2 percent of black seniors had definite plans to enter and 16.0 percent more said they would probably enter. Even here, of course, the interest in military service is widespread, for these data pertain to all black seniors, male and female. Plans to enter military service were at their peak in 1985, when 16.3 percent of black seniors had definite plans to enter the military, and 22.3 percent more said they were probable entrants.[13] Although these trends lend support to the argument that increased entry into military service may explain the decline in black college entry, the story will not hold up unless the trends among blacks differ from those among whites.

The percentage of black seniors with definite plans to complete a two-year college program varied between 9 and 14 percent during the decade, but there was no linear trend, nor any other significant variation across time in the percentage with definite plans.

Plans to attend a 4-year college are widespread, consistent with a good deal of other evidence that black youths report high levels of aspiration. From 32 percent to 40 percent of black seniors say they definitely plan to graduate from a four-year college, and another 20 to 25 percent say they will probably graduate from a four-year college. The percentages reporting the several plans appear to vary more from year to year in the case of college attendance than in the other items, but the overall tendency has been toward growth in plans for completion of a four-year college program, amounting to about .5 percent per year with definite or probable plans. That is, senior year plans to complete a four-year college program have increased slightly, even as black college entry has declined.[14]

Comparisons of Black and White Plans

If senior year plans are to help explain the divergence between the college entry chances of blacks and whites, then there must also be different trends in the plans of black and white seniors. Thus, it is necessary to compare trends in the post-high school plans of black and white seniors and to look for differences in those trends:

1. There does not appear to be any trend in white seniors' plans for technical or vocational schooling, nor is there any difference between blacks and whites in the temporal pattern of those plans.[15]

2. Changes in plans to enter military service do appear as potential sources of the decline in black college attendance. In relative terms, interest in military service has grown among blacks and whites. The consequences of this growth are larger in the black population because a larger share of blacks is interested in serving in the military. There has also been a larger relative growth in probable plans to enter the military among blacks than among whites.

3. There is virtually no difference between blacks and whites in the level or trend of plans to complete a two-year college program.

4. There have been increases in plans to complete a four-year college program among blacks, but the rate of increase has been larger among whites. In 1976, more blacks than whites reported they were planning to complete a four-year college program, but this differential was eliminated over the decade by the faster growth in college plans among whites.

Aspirations of Black and White Seniors

Aspirations are desired outcomes not limited by resource constraints. To measure aspirations, the Monitoring the Future surveys ask about the several post-high school activities with the instruction, "Suppose you could do just what you'd like, and nothing stood in your way. How many of the following things would you WANT to do?" In brief, we find no significant differences between black and white seniors in aggregate trends in aspirations. In particular, there is no suggestion in the data of declining college aspirations among black seniors, and we find the same trends among black men as among black women.

As a further test and elaboration of these findings, we have looked at time series of college plans and aspirations, by sex, controlling social background -- region, urban location, intact family, mother's education, and father's education -- using unit record data for approximately 138,000 seniors from 1976 to 1986. Our initial findings about college plans and aspirations are reported in figure 3 to figure 6.

Figure 3 shows observed and adjusted trend lines in the college plans of black and white women. The upper two lines are the observed trends, while the lower two trend lines have been adjusted for region, urban location, family structure, and parents' education. The intercepts of the adjusted trend lines have been chosen arbitrarily, so there is nothing interesting in the relative location of the observed and adjusted lines. The important matters are the trends and black-white differences in the trends. As we have already remarked, the observed trend in college plans is upward for black and white women. The adjusted trend is also upward throughout the decade for white women, while for black women, there may be a decline from 1976 to 1978, followed by a plateau for the remainder of the decade.

Evidently, the trend in white women's plans is strong, regardless of social background, while the trend for black women is explained by favorable changes in social background. Primarily, we believe, the explanation lies in increasing levels of parental schooling.

Figure 4 shows a parallel analysis of college plans among black and white men, and the findings are similar to those among women. There are similar trends toward growth of college plans in the aggregate among black and white men; when social background is controlled, the trend remains favorable among whites, but there is a suggestion of decline among blacks.

Figure 5 shows the analysis of college aspirations among black and white women. Again, the observed, aggregate trend is favorable among blacks and whites. The adjusted trend line shows steady growth in college aspirations among white women, but there is essentially no trend among black women.

Finally, figure 6 shows the trends in college aspirations among black and white men. The observed, aggregrate trends show virtually the same, favorable movement among blacks and whites. When adjusted for social background, there remains steady growth in aspirations among white men, but essential stability among black men.

Although the sources of trends in college plans and aspirations are evidently different among black and white high school seniors, there was growth from 1976 to 1986 in the plans and aspirations of all four groups: black and white, male and female. Among whites, plans and aspirations grew regardless of social background - as specified by regional and urban location, parental schooling, and family structure; among blacks, the trends were driven by favorable changes in background, primarily, we believe, by historic gains in parental schooling. All the same, we find nothing in the data that would suggest that changes in plans or aspirations could account for the turnaround in black college-going chances.

Plans vs. Aspirations: Is There a Gap?

Changing levels of opportunity might be expressed in changing relationships between plans and aspirations. That is, even though we have no reason to find close agreement between aspirations and plans, either at the individual level or in the aggregate, changes in aggregate plans relative to levels of aspiration may indicate changes in the availability of resources for the pursuit of different activities. This possibility is suggested by a comparison of the adjusted trends in college plans and aspirations, for there may be some decline in the former among blacks, but not in the latter.

In order to pursue this issue, we have modelled the joint distributions of college plans and aspirations across time, considering the effects of social background on each by gender, and looking for conditional variations in the relationship between plans and aspirations. Briefly, there is little variation in the relationship between plans and aspirations. However, the two are more closely linked among youths - male or female - who are white or who are from intact families. On the other hand, there are no significant temporal changes in the relationship between plans and aspirations or in the effects of other variables on that relationship. Thus, we find no evidence of a change in the relationship between college plans and aspirations that could help to explain the trend in black college attendance.

Summary and Conclusions

There is very weak evidence that aggregate changes in black students' plans or aspirations correspond to the observed changes in their chances of college entry. Our main finding is that college plans and aspirations of black and white seniors have followed similar paths in time, even though the sources of these trends differ.

The larger absolute and relative increase in plans to enter the armed forces among blacks, along with the larger increase in plans to complete a four-year college program among whites, might be said to correspond to some degree with the turnaround in black college entry. Yet, in our opinion, this is weak evidence indeed of a change in values or motivations among blacks - or even of post-high school intentions, narrowly conceived - that would be sufficient to account for the decline in their chances of college entry. Both in the case of military service and of four-year college programs, the overall trends in plans are the same for blacks as for whites; there is only a difference in the rate of change, not a difference in the direction of change.

Furthermore, there are no significant differences between black and white seniors in the trend of aspirations for any of the post-high school activities that have been examined here.

The movements of plans and aspirations do provide some help in our efforts to explain the turnaround in black college entry. First, we have learned, quite certainly, that the turnaround is not explained by any massive shift in black seniors' aspirations or plans. Although there are differences in levels of expectation and aspiration between blacks and whites, there is great similarity between blacks and whites in definite plans for post-secondary education and in the trends in those plans; likewise, there is great similarity between blacks and whites in aspirations for post-secondary schooling and in the trends in those aspirations.

Second, we should consider the possibility that the turnaround in black college entry may be, at least in part, an artifact of the entry of less qualified students during the peak years of the 1970s. Although college entry in the fall following high school graduation is a very useful indicator of college attendance, especially because it can be linked to other social characteristics in the Current Population Survey, it is by no means the only relevant or sound indicator of post-high school educational attainment. If the evidence of a rise and fall in college entry is valid, then it ought to be reflected, with a lag of four to five years, in rates of college completion. If there is no lagged rise and fall in college completion, then the trends in college entry may reflect temporary shifts in the composition of cohorts of new college entrants.

Third, we have learned that we ought to look more closely at the chances of entry into military service and at the possible reasons for it. This remains an interesting, but questionable line of explanation. On the positive side, blacks' plans and aspirations to enter the military have grown; on the negative side, they have grown almost as fast among whites as among blacks. On the negative side, also, remains the close correspondence between trends in chances of college entry among black men and women.[16]

Fourth, we ought to look further into other possible sources of the turnaround about which the present analysis provides no evidence. One relevant source of the turnaround in college entry could be change in the labor market for recent black high school graduates. There is a good deal of evidence that school continuation is counter-cyclical, that is, that strong labor markets attract potential students, while weak labor markets drive potential students into school (Duncan 1965, Mare 1981). We have not yet seen a definitive assessment of changes in the labor market for recent high school graduates between the late 1970s and the middle 1980s; here, the difficulty would be to show that the market has become more favorable for black high school graduates, but not so favorable for white graduates.

Another plausible source of change in black college entry is the shift away from direct grants toward loans to finance college attendance. The argument for a differential effect on blacks and whites is that, having observed the income distribution, blacks discount the future more heavily than whites at every income level. Also, blacks will be less likely than whites to have a family capable of absorbing the cost of a loan, again, regardless of income. Thus, a potential post-college debt of $10,000 will loom much larger for blacks, regardless of current family income, than for whites. One item of evidence supporting this interpretation is that black high school seniors in the High School and Beyond survey of 1980 were far more likely than either whites or hispanics to report that "expenses" or "financial aid" were very important in their choice of a post-secondary educational institution. For example, 62.8 percent of black male seniors, compared to 31.9 percent of white male seniors, said that financial aid was very important in their choice (National Center for Research in Vocational Education 1987:85). Among the findings of this report, we think that much of the evidence points in the direction of a lack of financial support as a key variable in explaining observed changes in college entry.

FOOTNOTES

1. This paper was prepared for presentation at the 6th annual NASSGP/NCHELP Research Network Conference, Washington, D.C., June 7-9, 1989. Support for this research was provided by grants from the Spencer Foundation, the Graduate School of the University of Wisconsin-Madison, and the Kenneth D. Brody Foundation, by grants for core support of population research from the National Institute of Child Health and Human Development (HD-5876) and from the William and Flora Hewlett Foundation to the Center for Demography and Ecology at The University of Wisconsin-Madison, and by graduate fellowships from the University of Wisconsin and National Science Foundation to the second author. Kenneth A. Shaw and Thomas G. Mortenson prompted our curiosity about trends in post-high school aspirations of black and white seniors, and Robert Mare provided other helpful suggestions. The opinions expressed herein are those of the authors.

2. Children's Defense Fund (1985), College Entrance Examination Board (1985), Lee, Rotermund, and Bertschman (1985). Perhaps the best reviews of the facts and issues surrounding the possible decline in college attendance among blacks are Arbeiter (1986) and Arbeiter (1987).

3. This choice of reference categories affects the overall location of the two trend lines in the vertical dimension, but it does not affect the year-to-year trends or the relative position of the black and white trend lines.

4. Clearly, it will be important to look at rates of college completion for cohorts approximating those who entered college during these periods.

5. When the chance of entering college is near 50 percent, a shift of .1 on the logarithmic scale is equivalent to shifts of about 2.5 percentage points upward/downward in the chances of college entry/non-entry.

6. The black-white difference in the log scale is -.7, and $e^{-.7} = .5$.

7. See Hauser (1987) for details. To a reasonable approximation, the adjusted trend line in figure 2 gives the difference between the black and white lines in figure 1. However, the models on which figure 1 is based permit the effects of income and other variables to differ between blacks and whites, while the adjustment in figure 2 is based on a model in which the effects of income and other variables are the same for blacks and whites.

8. This model does not permit effects of sex, region, metropolitan location, or family income to vary between blacks and whites or across years. Thus, the difference between the two trend lines in figure 2 is entirely due to differences in population composition.

9. Again, the data in Figure 2 have been smoothed using 3-year moving averages.

10. Of course, the Wisconsin studies are by no means unique in documenting the importance of aspirations and expectations in post-school experience. Although several critics have doubted the validity of this model among blacks, recent work has provided solid support for it (Gottfredson 1981, Wolfle 1985).

11. Although the MTF surveys began in 1975, there were too many missing data on these items in the 1975 survey. They have not been used in the present report.

12. Throughout this section, all of the statements in the text about trends, black-white differences in plans, and trends in black white differences are supported by formal statistical tests. In carrying out these tests, we used a design factor (DEFF = 2.7) to deflate the counts in the cross-classification table. In reporting test results, we use the term "change" to refer to any variation in responses across years, and we use the term "trend" to refer to monotonic or linear shifts in responses across years. We used a .05 significance level. Likelihood-ratio chi square tests for change in the proportion of black students with definite or probable plans to attend technical or vocational schools after high school yield non-significant values. There is no significant linear trend, either in the proportion of black students with definite plans to attend technical or vocational school or in the proportion of black students with definite or probable plans to attend technical or vocational school. There are no significant changes across time in the relative chances of probable and definite plans not to attend technical or vocational school.

13. The changes over time in definite and in probable plans to enter the armed forces are statistically significant. A positive linear trend in the chances of expressing definite or probable plans to enter the armed forces accounts for about two thirds of all change across the decade in the combination of these two responses; there is no trend across time in the choice between definite and probable plans. There is no significant change across time in the relative chances of definite and probable plans not to enter the armed forces.

14. In global tests for change, there is no significant variation in definite plans from year to year, but there is significant temporal change in the proportion stating definite or

probable plans to complete a four-year college program. However, there are significant linear increases in the chances of having a definite plan to complete a four-year college program and in the chances of having a probable or definite plan to complete a four-year college program. As in the previous analyses, there are no significant temporal variations in the relative chances of definite or probable plans, either within the group planning to attend college or within the group not planning to attend college.

15. There is no significant linear trend across time, nor other temporal change in the log odds that seniors definitely or probably plan to attend technical or vocational school. Both in the case of definite plans and in the case of probable or definite plans combined, the cross-classification of race by plan by year is fitted well by a loglinear model in which there are no three-way interactions, and there is no association between plans and year, linear or nonlinear, for blacks or whites.

16. To look further into this possibility, we plan to examine trends in the schooling of military personnel, using data supplied by the Department of Defense.

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Table 1

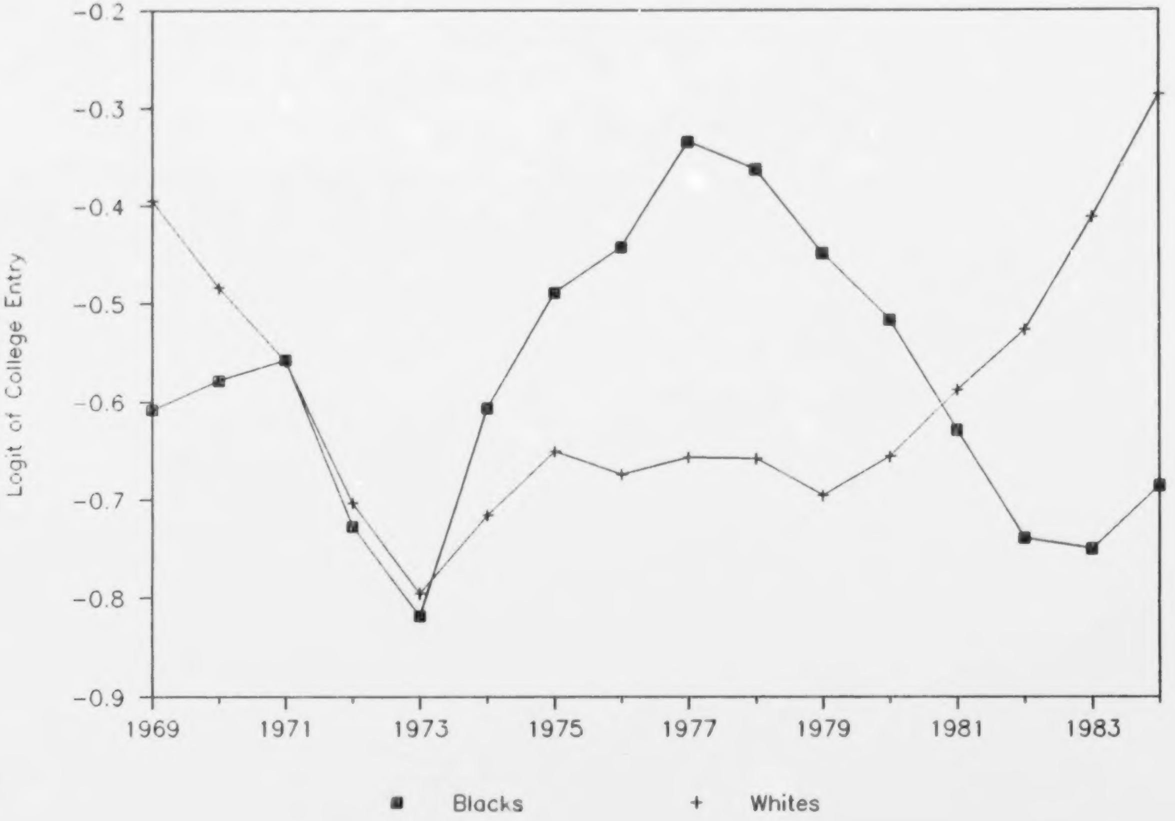
Summary of Findings from Monitoring the Future Surveys, 1976-85

	Tech-Voc	Arm Serv	2-Yr Col	4-Yr Col
Expectations				
Black	No Trend	Up	No Trend	Up
White	No Trend	Up	Up (small)	Up
Difference in Trend	None	Black Larger	None	White Larger
Aspirations				
Black	Down	U-Shaped	None	Up
White	Down	U-Shaped	None	Up
Difference in Trend	None	None	None	None
Expectations Relative to Aspirations				
Black	Up	Up	Up	Down
White	Up	Up	Up	None
Difference in Trend	None	None	None	Black Decline

Figure 1

College Entry Among Recent Black and White High School Graduates: Adjusted for Family Income, Sex, Region, and Metropolitan Location,

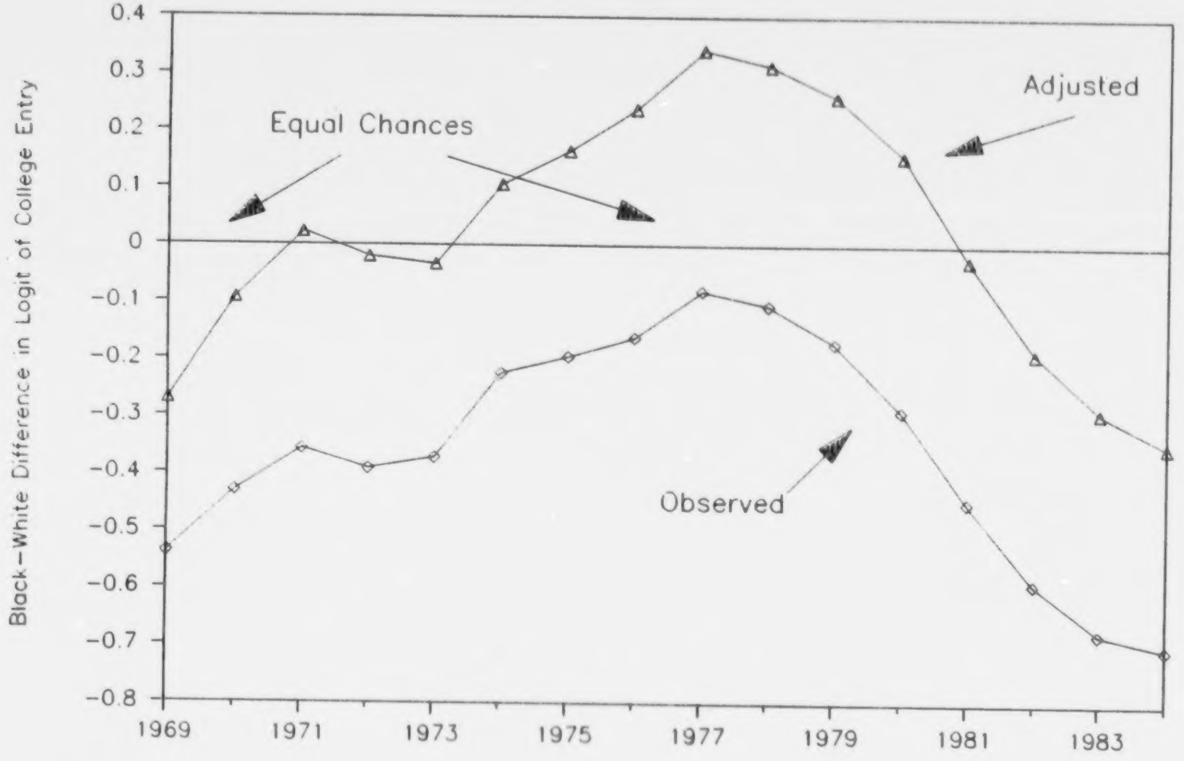
October 1969-84



ADJ2 (BWTREND2) 6/6/89

Figure 2

Black–White Differences in College Entry: Observed and Adjusted for Family Income, Sex, Region, and Metropolitan Location, October 1969–84



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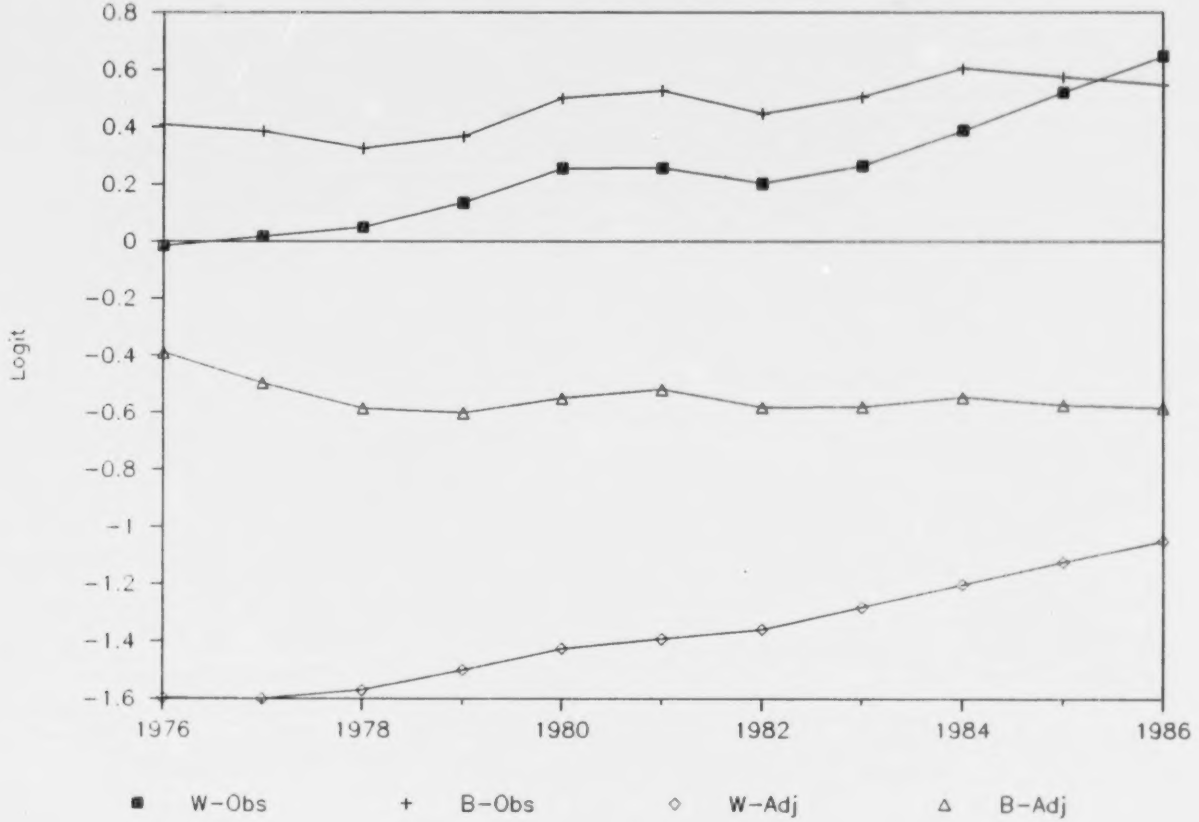
BWDIFF2 (BWDIFF1) 6/6/89

Figure 3

College Plans of Black and White Female High School Seniors, 1976–1986

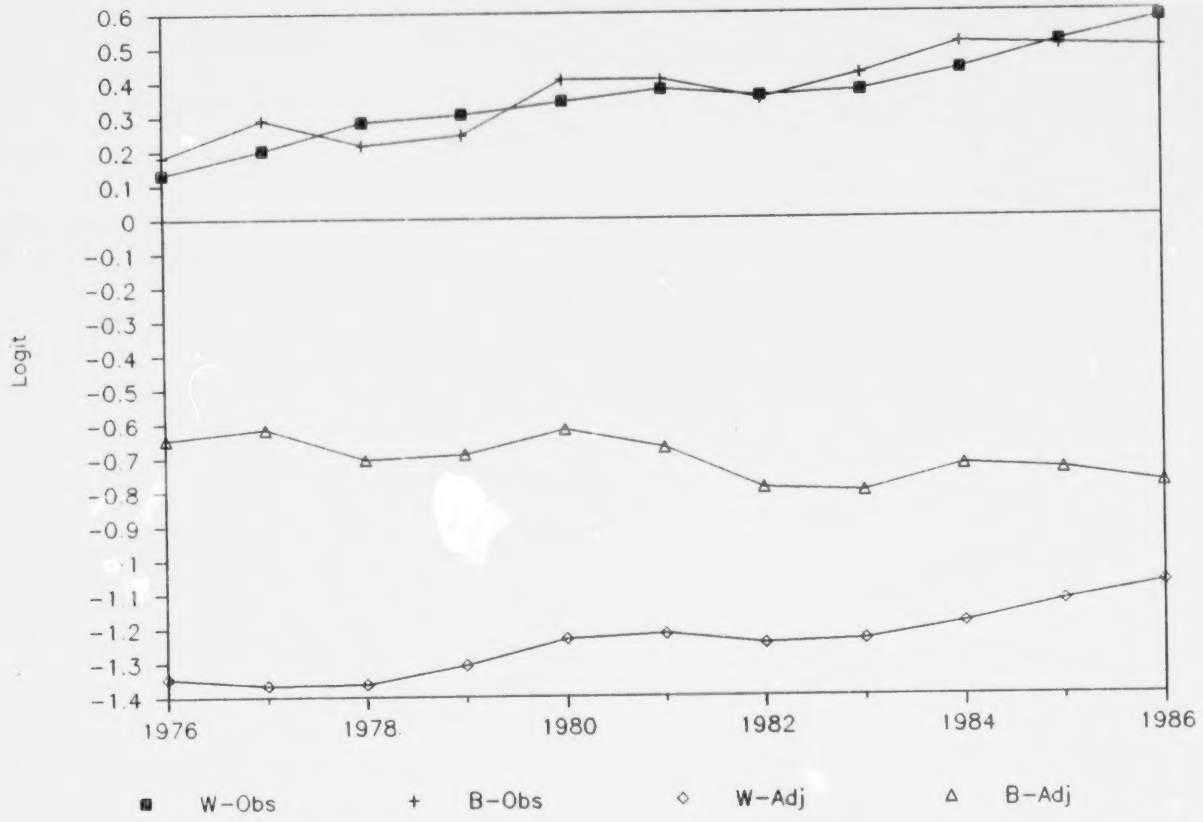


Note: Adjusted series control region, urbanicity, family structure, and parents' education.

FPBYRC (MTFBYRC) 6/6/89

Figure 4

College Plans of Black and White Male High School Seniors, 1976–1986

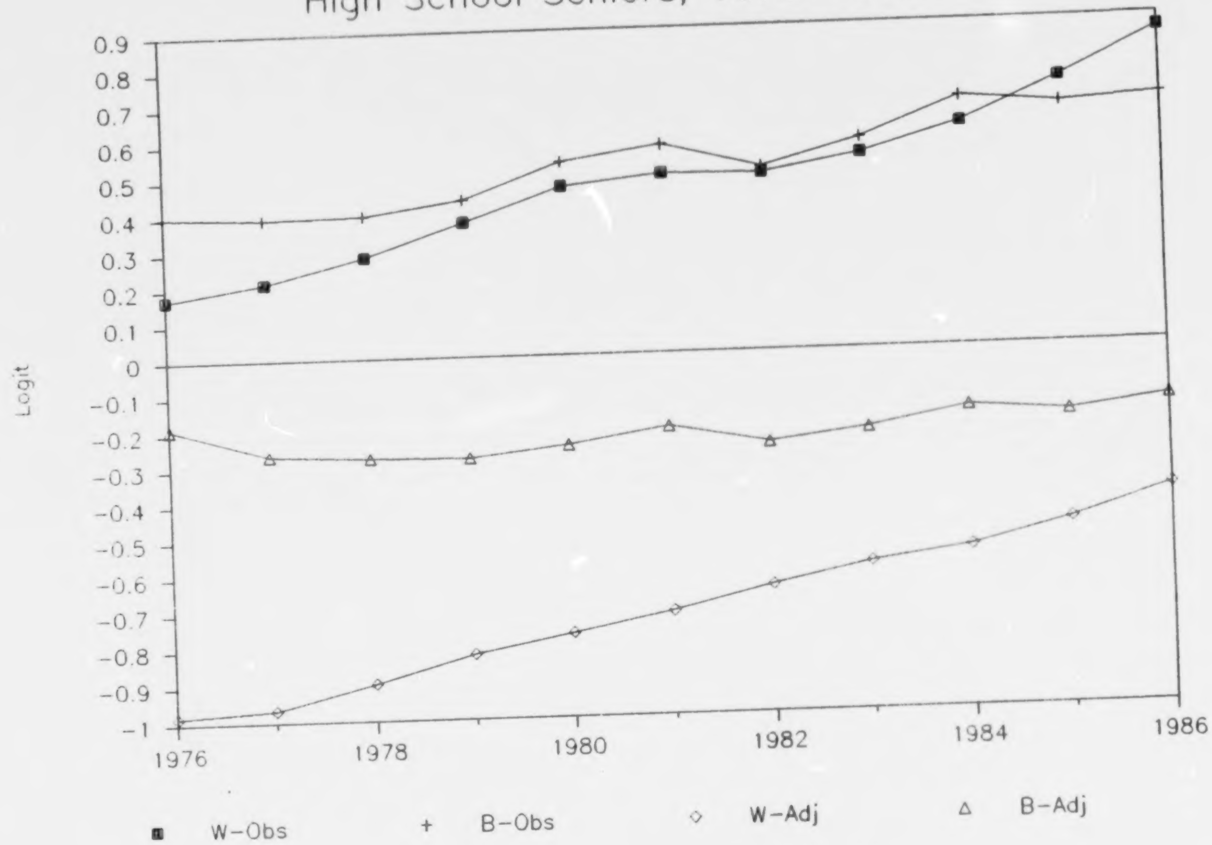


Note: Adjusted series control region, urbanicity, family structure, and parents' education.

MPBYRC (MTFBYRC) 6/6/89

Figure 5

College Aspirations of Black and White Female High School Seniors, 1976–1986



Note: Adjusted series control region, urbanicity, family structure, and parents' education.

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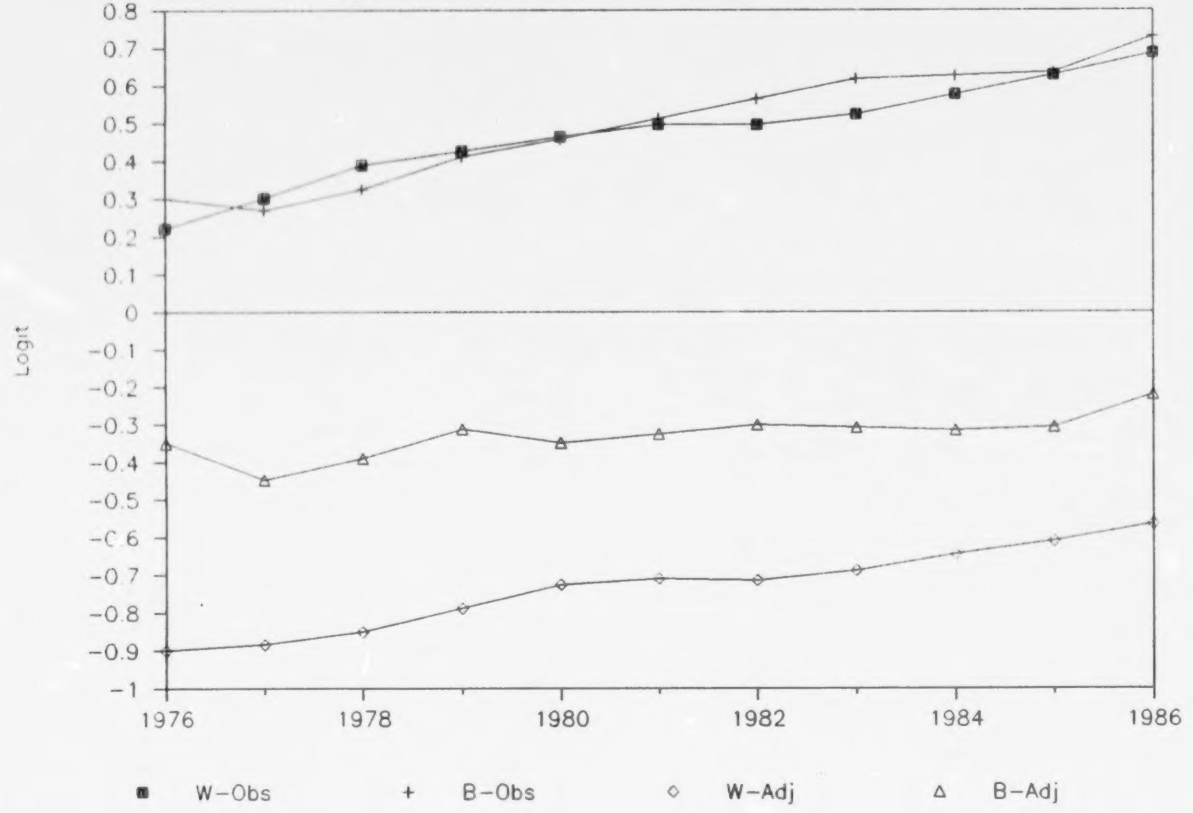
Figure 6

College Aspirations of Black and White Male High School Seniors, 1976–1986



Note: Adjusted series control region, urbanicity, family structure, and parents' education.

MWBYRC (MTFBYRC) 6/6/89

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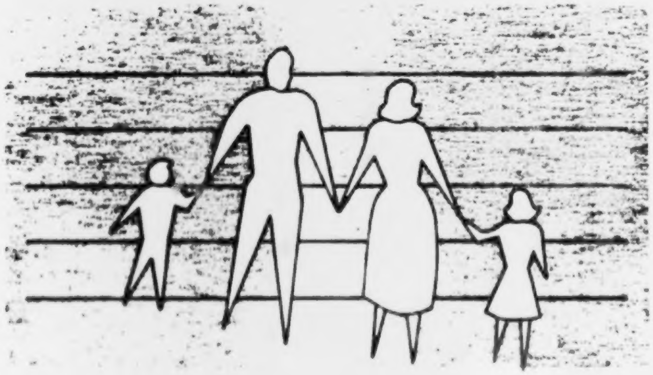
VANISHING DREAMS

THE ECONOMIC PLIGHT OF AMERICA'S YOUNG FAMILIES



Prepared by:

Children's Defense Fund
and
Center for Labor Market Studies
Northeastern University

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FOREWORD

By Marian Wright Edelman
President, Children's Defense Fund

A friend recently said his 20-year-old son had begun to doubt he would achieve the economic success of his father. "I think the American dream is starting to run in reverse," the son told the father.

He may be right. The economic landscape is shifting, and there are more than a few signs that this young man's generation could be the first to end up worse off than their parents.

Americans younger than 30 are suffering a frightening cycle of plummeting earnings and family incomes, declining marriage rates, rising out-of-wedlock birth rates, increasing numbers of single-parent families, and skyrocketing poverty rates. Families headed by persons ages 30 and older generally are holding their ground, while families headed by individuals younger than 30 are sliding backward. The question is not whether the economic glass for America's families is half empty or half full. Rather, older families have a glass that is mostly full; the glass young families hold is mostly empty.

This report describes the current status of families headed by persons under age 30; compares the economic well-being of the current generation of young families in 1986 with that of the preceding generation in 1973; and analyzes the widening gaps between young families with and without children, between young families headed by persons with the least and most education, and between younger and older families. The report examines some of the consequences of falling earnings and incomes among young families: decreased marriage rates and rising out-of-wedlock birth rates, growing inability to afford housing and child care, and declining health insurance coverage. The report also analyzes regional trends in the economic status of young families.

This report treats as "young families" all those families headed by persons under age 30. The "earnings" figures examined in this report are the total earnings of the heads of young families during the course of the year (not including the earnings of a spouse or other family members). "Income," on the other hand, refers to the total of all sources of income for the family, including the earnings of all family members as well as child support payments and cash transfer payments (such as disability benefits, unemployment insurance, welfare, or Social Security survivor benefits) received by the family during the course of the year. All data on earnings and income are adjusted for inflation.

TEN KEY FINDINGS

- **One: An economic disaster has afflicted America's young families, especially those with children.** The median income of young families with children fell by 26 percent between 1973 and 1986—a loss virtually identical to the 27 percent drop in per capita personal income that occurred during the Depression from 1929 to 1933. As a result, the poverty rate for young families has nearly doubled, jumping from 12 percent in 1973 to 22 percent in 1986. Three-fourths of this increase in poverty among young families occurred during the 1980s.

Rising poverty rates have affected all groups of young families—whether white, Black, or Hispanic, married couple or single-parent. In fact, the greatest relative increases in poverty occurred among young white families, young married couple families, and young families headed by high school graduates. Nearly half (47 percent) of the increase in the number of young families living in poverty since 1973 is the result of rising poverty rates among young white families. These increases in poverty also affected young families in every region of the nation.

- **Two: Poverty among children in young families has skyrocketed.** In 1986, 35 percent of all children living in young families were poor, compared with 21 percent in 1973. Young families with children are seven times more likely to be poor than those without children. More than half of the increase in the number of poor children in America since 1973 is the result of higher poverty rates among children living in young families. Young families now contain one-third of all poor children in America.

- **Three: The growing economic plight of young families has been caused by sweeping changes in the American economy that have reduced the earnings of young workers and undermined their ability to marry and form families.** While there is no single explanation for the economic disaster that has afflicted young families, declining real wages among young workers has been a major cause. Among employed men who head young married couple families, more than 90 percent of the drop in their annual earnings between 1979 and 1986 was a result of lower hourly wage rates (adjusted for inflation). A sharp drop in the value of the federal minimum wage, compared with inflation during the 1980s, and the continuing shift of employment from manufacturing industries to the service sector both contributed to this decline in the wages paid to young workers.

The growing economic plight of young families also reflects the increasing share of such families that are headed by single women, who typically have far lower earnings than heads of young married couple families and whose families rarely have second wage earners to help compensate for earnings losses. Yet this rising share of young female-headed families also is related directly to the declining earnings of young workers, because young men who earn enough to support a family are three to four times more likely to marry than those without such adequate earnings. As the earnings of young men fell sharply between 1973 and 1986, their marriage rates also dropped by one-third, and the proportion of births to young women that were out of wedlock nearly doubled, rising from 15 percent in 1973 to 28 percent in 1986.

- **Four: Young Black and Hispanic families have suffered particularly severe earnings and income losses.** Since 1973 the median earnings of heads of young minority families have plummeted—by one-half for young Black family heads and nearly one-third for young Hispanic family heads. More than half of all young Black high school dropouts who head families reported no earnings whatsoever in 1986. Even young Black college graduates who head families had their median earnings decline by 31 percent during this period. As a result, 58 percent of all children in young Black families, as well as 48 percent of all children in young Hispanic families, were poor in 1986.

- **Five: Education still pays, but a high school diploma is no longer an adequate defense against poverty for young families.**

While young families headed by high school graduates have fared better than those headed by dropouts, the high school diploma has not shielded them from economic losses. The median income of such families fell by one-sixth between 1973 and 1986, and their poverty rate more than doubled. More than one in every five young families headed by a high school graduate was poor in 1986, and increased poverty among these families accounted for 58 percent of the total number of young families that have fallen into poverty since 1973.

Those young families headed by persons with the least education have suffered the most dramatic income losses. The median income of young families headed by high school dropouts fell by 35 percent between 1973 and 1986, while their poverty rate jumped from 29 percent to 46 percent. In contrast, the median income of young families headed by college graduates increased during this period, and only 2.5 percent of such families were poor in 1986. A child living in a young family headed by a female high school dropout is 14 times more likely to be poor than a child in a young married couple family headed by a college graduate.

- **Six: While young female-headed families are by far at the greatest risk of poverty, young married couple families also have suffered, avoiding large income losses only by having both parents work.** The median annual earnings of female heads of young families are extremely low ($1,560 in 1986), and such families' median income has dropped by 26 percent since 1973. More than two-thirds of all young female-headed families with children were poor in 1986.

In contrast, young married couple families avoided dramatic income losses, but only by having two wage earners. Men in married couple families suffered a substantial median earnings loss from 1973 to 1986 (16 percent), but such families compensated for much of this decline by sending women into the work force more frequently. However, those young married couple families with children—who typically find it harder to send two adults into the work force full time—still suffered an 8 percent drop in their median income despite increased work effort. If their increased child care costs could be computed, it would show that their net income losses were greater, but the data do not allow such a computation. The poverty rate for young married couple families with children has doubled since 1973, leaving one in every eight such families poor in 1986.

- **Seven: Inequality of income has grown substantially among young families.** The poorest fifth of all young families—which contains 30 percent of all children in young families—received only 4 percent of the total income available to young families in 1986, down from 6 percent in 1973. During the same period, the share of the total income pie received by the wealthiest fifth of young families grew from 37 percent to 42 percent. A child who lived in a young family in the poorest fifth in 1986 had an average annual per capita income of only $1,122, compared with $11,628 per capita for children in the highest fifth. For Black children in the poorest fifth, the average per capita income was only $656, and for Hispanic children only $822.

- **Eight: The youngest families find it increasingly difficult to obtain an adequate income.** Families headed by persons under age 25 have suffered the greatest declines in earnings and incomes since 1973. The median earnings of such very young family heads with children plunged by 60 percent, so that by 1986 more than half (54 percent) of all children living in such families were poor. One in every three poor children under the age of six lives in a family headed by a person under age 25.
- **Nine: Home ownership is now beyond the reach of most young families.** In 1973, it took slightly more than one-fifth of the median income of a young family with children to carry an 80 percent mortgage on a newly purchased, average-priced house. By 1986, this burden had more than doubled to 51 percent of median income needed to carry a new mortgage on such a house. As a result, home ownership among young families with children has fallen. For those families headed by persons under age 25, the drop was more than 25 percent between 1973 and 1987.
- **Ten: Young adults are least likely to have health insurance or access to the health care they need as they start their families.** Young people between the ages of 18 and 24 are the least likely of any age group to be covered by private health insurance and suffered the largest decline in insured status of any age group from 1974 to 1984. More than one in five children in young families had no health insurance in 1986. Declining incomes and insurance coverage take a toll. The share of young pregnant women receiving late or no prenatal care actually increased from 1976 to 1986. By the end of that period, the nation's progress in reducing infant mortality ground to a halt.

WHAT MUST BE DONE

Young families must be a central concern to Americans because their fate determines the fate of a majority of America's children. Most children are born into a family at a time when one or both parents are younger than 30. They then spend some or all of their most important early developmental years in the family while the parents are young. Whether the mother gets good prenatal care, whether the infant is warm and well-fed and well-housed, whether the toddler is immunized, and whether the preschooler is in safe, quality child care all depend on young parents' ability to afford the basic necessities of life. Even the makeup of the family—whether the baby's parents are married—and the family's prospects for long-term stability and self-sufficiency depend frequently on the young parents' early economic status.

A poor child is more likely than a nonpoor child to go without necessary food, shelter, and health care and to die in infancy. Poor children are less likely than nonpoor children to be in good preschool programs or child care settings, and more likely to fall behind in school, drop out, get pregnant too soon, and be unemployed or sporadically employed.

One out of every three children in young families now officially does not have enough to live on. This should shame us all. It should also scare us all. These are the children on whom we must rely to be the workers, leaders, parents, taxpayers, soldiers, and hope of America's twenty-first century. We are getting them off to the worst possible start. Our children and our young families are this nation's growing edge. We neglect them at our peril.

Immediate Action is Necessary

America's young families cannot wait another year for a response to the economic disaster that has struck them. While the deterioration of their economic status will not be reversed quickly or easily, two immediate steps must be taken by Congress to begin to halt the precipitous declines in their incomes and to help young families with children cope with the increasing economic pressures caused by declining earnings:

- **Increase the federal minimum wage,** which has lost one-fourth of its real value to inflation since it was last raised in 1981. In 1986, 26 percent of all workers paid on an hourly basis earned less than $4.50 per hour—which was the inflation-adjusted value of the 1979 minimum wage. Modest legislation pending in both the House and Senate would increase the minimum wage gradually from its current $3.35 per hour to $4.55 per hour by 1991, thereby recapturing most of the ground lost to inflation during the 1980s.
- **Enact the Act for Better Child Care Services (ABC),** which would bring the federal government into partnership with state and local governments and employers to ensure

ADULT KIDS LIVING AT HOME

The following excerpts are taken from Kids As Politics: Issue Advisory 1988, *by Stanley B. Greenberg, The Analysis Group, Inc., New Haven, Connecticut. The report is based in part on a series of focus groups conducted by The Analysis Group.*

Voters show a growing concern with adult kids who still live at home, unable to find a secure economic niche and to start a home. Their presence is a visible reminder that kids in this changing economy face harder times and that parents will have increasing difficulty succeeding as parents. . . .

There is a new reality in the consciousness of modern American families—kids, seemingly grown-up, still living with their parents as they try, haltingly, to find their way into the labor market, marriage and a home. It is apparent now that those aging children at home represent a larger reality and a host of problems: the movement of jobs to other regions, the rise of lower-paying and dead-end service sector jobs, the uncertain match between education and the right job, inflated prices for housing, the apparent need for multiple incomes in a household to get ahead, not to mention the problems of managing a family of adults trying to live together.

The visibility of adult kids living at home compounds the problem. Those "kids" are a visible reminder both to the parents and their friends that something has not worked out right. On the one hand, the kids have not "succeeded" in securing their economic position and future; on the other hand, the parents have not been able to pass on their status and accomplishments and have not been able to realize their parenthood through their children's family and home. The adult kid at home is a daily reminder of that reality.

That the problem has a strong meaning for voters is evident in these exchanges that occurred in the introductory discussions of many of our groups. [A Michigan man said:]

> *I think every parent here wants their children to do the best they possibly can. But another thing is, I see friends of mine who are older; have kids that are living at home that are 25 and 30 years old. I've seen a lot of that. They can't afford to move out. My brother just moved out, and he's 34. . . .*

These worries about adult kids living at home are the most visible part of a larger set of concerns, specifically, the feeling that kids today will have a harder time than their parents. That helps explain why the general satisfaction with today's economy does not seem to translate into reduced anxieties about the economy in general.

The fears were very general in our groups, almost independent of the state of the local economy: "It's going to be very tough on them"; . . . "I'd like to say that if I have a frustration and some pessimistic views, it's regarding my kids and their future." One man concluded, "I think the start-up costs are too much for most people to get into their dreams today."

This society and state, voters believe, are shifting under their feet, throwing into doubt the conventional assumptions about kids and their opportunities. The labor market now operates by rules they do not begin to understand; it offers opportunities that seem meager by comparison with their own lives; it requires skills and capacities that are difficult to acquire.

Voters live, it seems, with the specter of "McDonalds"— the fear that kids might end up in dead-end, low-paying service jobs. One can no longer presume, as many older workers do, that manufacturing will offer decent paying entry level jobs to people with rudimentary skills. A union participant described the bleak prospects: "There are no factory level entry jobs any more. We're like the dinosaurs, most of us here." [Another participant agreed:] "Our children aren't going to have it as good as we have it today. I think everybody realizes that. . . ."

These problems breaking into the labor market translate directly into problems breaking out of the house. "At our age, we could buy houses when we were 20 years old," one man recalled. . . . "They said, 'Where do you work.' You get a letter. You can move in on a VA mortgage and put nothing down and have a house. But nowadays, with the property values and everything, it don't look real promising as far as the kids owning some real estate or anything like that."

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that children in working families get safe, quality, affordable, and accessible child care. As two incomes increasingly become a prerequisite for the economic survival of young families with children, typically very young children who need child care while their parents work, immediate enactment of ABC is essential.

An Agenda for 1989 and Beyond: Eight Recommendations

Beyond these two immediate steps, the nation must adopt a long-term investment strategy beginning in 1989 to restore a strong economic base for young families, respond to the new realities of a rapidly changing labor market, and prepare today's children and youths for productive roles in tomorrow's economy.

The following steps would help protect the well-being of today's young families and their children, while also encouraging the formation of new families in the years ahead:

- **Extend Medicaid coverage to reach all pregnant women and children in families with incomes less than twice the poverty threshold.** In 1988, Congress took an important step to help young families without health insurance by expanding Medicaid eligibility to include all pregnant women with incomes below the poverty threshold. We now must build on this progress by extending coverage to all pregnant women and to all uninsured children under age 18 in families with incomes less than twice the poverty threshold.
- **Expand the Earned Income Tax Credit (EITC) to give more help to low-income working families.**The EITC currently provides a much-needed offset of payroll taxes and income support for working families with dependent children and earnings below or slightly above the poverty level. By raising the credit (and the earnings levels at which it applies) and expanding the amount of assistance given to those families with more than one child, Congress can make the EITC an even better device to alleviate the plight of working poor families, including many young families with children.
- **Build upon the successes of proven, cost-effective programs such as Head Start, Chapter 1, and the Job Corps and mount comprehensive strategies to prevent teen pregnancy by building strong basic skills and self-esteem in the early years and positive life options for all teens.** We have already developed proven strategies for improving the basic academic skills and employment preparation of young Americans, and yet these critical programs reach only a fraction of all children in need of such assistance. We must expand Head Start so that it reaches half of all eligible children in five years, and build Chapter 1 so that it reaches all eligible children by 1992. Funding for the Job Corps also should be increased steadily in future years, both to allow the current residential program to serve more youths and to explore ways of adapting the Job Corps model to nonresidential settings.
- **Create a network of community learning centers that will strengthen the basic skills of children and youths in out-of-school settings.** America needs a new community ethic regarding learning for all and not just some children, one that involves all segments of the community in efforts to build high academic expectations and a strong academic foundation for all young Americans. By forging a federal–state partnership to support the development of community learning centers, the creative efforts of the full range of local agencies and community groups involved with children and youths can be tapped to expand out-of-school opportunities for learning.
- **Repair the safety net for young families without adequate incomes.** To protect children living in poor families, AFDC benefits must be increased to levels that more adequately reflect the cost of raising a family. The federal government should provide that benefit levels, when combined with food stamps, equal at least 75 percent of the poverty level. States also should be required to provide such benefits to two-parent families when both parents are unemployed. These steps should be coupled with stronger child support enforcement and increased investment in education and training to help AFDC families move toward self-sufficiency.
- **Build a stronger bridge from school to work for noncollege-bound youths.** Relatively low-cost programs of employment preparation, job placement assistance, counseling, and peer support can increase the earnings of young people not going on to college, particularly high school graduates. Expanded apprenticeship and on-the-job training opportunities also are needed to bolster the skills and future productivity of young workers. These efforts should be promoted through federal matching grants to states that replicate promising program models in these areas.
- **Increase targeted federal grants to lower-income students in order to bolster college attendance and to reverse declining college enrollment among minority youths.** In order to ensure that young people from low-income families can attend college, the federal government should fully fund the Pell grant program and rely more heavily on Pell

grants rather than loan programs in future years to encourage greater college attendance and to prevent student indebtedness from rising to prohibitive levels. Federal support for programs that provide counseling, tutoring, and other supportive services to low-income students also should be increased to stimulate and maintain college enrollments.

- **Reinvigorate federal efforts to assist first-time home buyers and help low-income families cope with soaring rent burdens.** The nation has vast experience with programs to expand home ownership—through the GI Bill and other post-World War II era programs—but we need to renew our commitment to such efforts as a way of helping young families enter the home-buying market. In addition, an expanded federal rental assistance initiative for low-income families and programs to stimulate the construction or renovation of affordable rental housing are essential to combat the excessive rent burden that young families often face.

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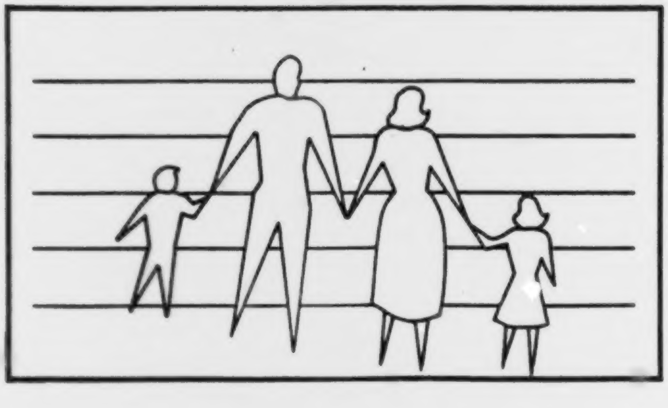
THE ECONOMIC PLIGHT OF AMERICA'S YOUNG FAMILIES

AN UPDATE OF CDF'S VANISHING DREAMS REPORT



Prepared by:

Children's Defense Fund
and
Center for Labor Market Studies
Northeastern University

OVERVIEW

One year ago in Vanishing Dreams we wrote that "an economic disaster has occurred for young families." Comparing the economic and social well-being of America's young families in the late 1960s and early 1970s to that of a new generation of young families in 1986, Vanishing Dreams pointed out that such families had suffered a frightening cycle of plummeting earnings, declining marriage rates, rising out-of-wedlock birth rates, increasing numbers of single-parent families, falling family incomes, and skyrocketing poverty rates. While families headed by persons age 30 and older in general held their ground, young families experienced an economic freefall.

Using the most recent available data, we have now updated key portions of Vanishing Dreams to 1987,* and have found that where the situation improved from 1986 to 1987, it improved very little, and that in some major respects things worsened.

By 1987 the nation was in the fifth year of its unusually long, if sometimes frustratingly slow economic recovery. The unemployment rate dropped significantly from a 7.0 percent average in 1986 to 6.2 percent in 1987. Median incomes for families (lumping all ages together) rose a little bit--about one percent faster than inflation. Yet the 1987 data show again that young families have been virtually severed from the national economy.

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* We have updated the three most important sets of economic data--earnings of family heads, family incomes, and poverty rates--drawn from the Current Population Survey, a household survey conducted by the U.S. Bureau of the Census in cooperation with the U.S. Department of Labor's Bureau of Labor Statistics. All earnings and income figures are adjusted for inflation, and expressed in constant 1986 dollars. We have also updated prenatal care data based on the Monthly Vital Statistics Reports of the National Center for Health Statistics. Young families are those headed by a person under age 30. The data on which this update is based appear in the Appendix and in last year's Vanishing Dreams report.

In past U.S. economic recoveries, the groups that are worst off economically--minorities and children and young adults--typically benefitted less from the earlier stages of a recovery, but showed more substantial gains in the later years. If these old rules still applied, 1987 should have been a good year for young families: the fifth year is very late in a recovery cycle by historical standards. But 1987 demonstrated anew that old economic rules no longer hold true for young families. Economic growth now barely trickles down to them.

The most distressing evidence of this is found in recent poverty trends. **The poverty rate among children living in young families, which has soared throughout the 1980s, continued to rise significantly in 1987.** Nearly 36 out of every 100 children living in young families lived in poverty in 1987. This represents nearly a 50 percent jump since 1979, when 24 out of 100 such children lived in poverty, and nearly a three-quarters increase since 1973.

Poverty Rates Among Children in Young Families

1973	1979	1986	1987	Change 1986-1987	Change 1973-1987
20.7%	24.2%	34.7%	35.6%	+2.6%	+72.0%

Black and Hispanic children in young families fared even worse. For black children the poverty rate rose from 58.2 percent in 1986 to 61.0 percent in 1987. For Hispanic children, the increase was from 47.8 percent to 53.4 percent.

Young families have fallen so far behind the rest of society that, while the poverty rate for the society as a whole fell in the two decades from 1967 to 1987, the poverty rate for children in young families nearly doubled from 19 percent to 35.6 percent.

Underlying this skyrocketing poverty rate is an eroding earnings base which is increasingly inadequate to support young families. **The median earnings for all heads of families under age 30 with children fell by more than 36 percent from 1973 to 1987.** The earnings picture did not brighten much from 1986 to 1987. Indeed, the earnings of all young family heads rose a paltry $107 (eight-tenths of one percent) in inflation-adjusted dollars from 1986 to 1987--a rate of increase so slow that it would take 53 years to offset the 1973-1986 losses. And the earnings of family heads age 25-29 continued to fall in 1987.

The causes of this earnings disaster lie in fundamental and often interrelated shifts in the economic and social structure that have reduced the earnings of young workers and changed patterns of family formation. A variety of factors have pushed the earnings of young workers downward, including the drop in the value of the minimum wage compared to inflation, the shift of jobs from manufacturing to the lower-paid service sector, the advent of two-tier wage structures that discriminate against young workers, and the growth of part-time and temporary jobs.

As a result, some young workers are now employed for fewer hours, and many are trapped at lower hourly wages when they do work.

The growing proportion of young families headed by single women with limited earnings potential also has contributed to falling median earnings for young family heads. Yet this change in family structure stems at least in part from the earnings losses suffered by young workers. Young men who do not earn enough to support a family are three to four times less likely to marry than those with adequate earnings. As earnings of young men fell from the early 1970s to 1987, their marriage rates also declined by one-third. Between one-fourth and one-half of this drop in marriage rates was attributable to young men's earnings losses. As marriage rates have dropped, the proportion of young family heads that are single--and have lower earnings--has risen. From the early 1970s to 1987, the proportion of births to young women that were out of wedlock nearly doubled.*

Because of lower earnings for family heads and the growing incidence of single-parent families, the total family incomes of young families are far below 1973 levels--with a 24.4 percent plunge from 1973 to 1987 in median income for young families with children. In the same period the income of families headed by persons 30 or older rose a little bit.

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* Births to teens are more likely to be out-of-wedlock than births to women 20 or older, but the doubling of the share of births that are out of wedlock did not come because teens are having more babies. Generally they are not, and teens accounted for 12 percent of all births in 1987, as opposed to 20 percent in 1973. Rather, fewer and fewer women--teens and older women--are getting married before the baby is born. If marriage rates had stayed at 1974 levels, there would have been 4.4 million more married couples in 1987.

Falling earnings of young workers in the 1970s and 1980s have pushed total family incomes down in two ways. First, the heads of many young families are simply earning less money, and the increased work effort of spouses in two-parent families has not been enough to offset that decline, especially in families with children. Second, as falling earnings have contributed to lower marriage rates, more young households are headed by single women (whose median earnings are far lower than those of other young workers and whose families cannot send a spouse into the workforce), thereby depressing the median income for young families much further.

While median incomes for all young families, with and without children, rose $211 (one percent) in 1987 compared to 1986, the increase was of limited significance. Older families gained more, so the income gap between age groups widened. More important, at the 1987 rate of improvement--even if sustained indefinitely--it would take until early in the 21st century for young families to regain the ground lost (a 13.5 percent drop in income) from 1973 to 1986.

The young family income picture is even bleaker for particular groups. Those families with children headed by 25-29 year olds suffered a 2.2 percent drop in income in 1987. Young black families' median income dropped 5.6 percent in 1987 compared to 1986, putting it a staggering 33.3 percent below its 1973 levels. **Indeed, in 1987 the median income of the nation's 1.3 million young black families for the first time fell below the amount needed to keep a 4-person family out of poverty.**

Young Black Families' Median Income Compared to Federal Poverty Line for a Family of Four

Year	Median Income (1986 Dollars)	Ratio of Median Income to Poverty Line
1967	$16,091	1.436
1973	15,912	1.420
1979	12,753	1.138
1986	11,250	1.004
1987	10,615	.948

As discussed in *Vanishing Dreams*, falling median incomes and rising poverty rates have severe and profound consequences for the well-being of young families and their ability to obtain housing, health care, and the other necessities of life. This update provides a glimpse of the impact of young families' plight on their access to essential health care. **The proportion of births to young women (under age 30) who received late or no prenatal care increased dramatically between 1976 and 1986, and continued to deteriorate in 1987.** In contrast, a decreasing percentage of births in older age groups were to women who receive late or no prenatal care.

FAMILY INCOME AND STUDENT FINANCIAL AID ELIGIBILITY

Thomas G. Mortenson
Senior Research Associate
Educational and Social Research
The American College Testing Program
Iowa City, Iowa

Paper for Presentation at the
Sixth Annual NASSGP/NCHELP Conference on Student Financial Aid Research
June 6, 1989
Washington, D.C.

FAMILY INCOME AND STUDENT FINANCIAL AID ELIGIBILITY

This study linked the incomes of families having children with the costs of college attendance through need analysis. That is, this study looked at dependent children who would require financial aid to pay for college if they went to college now.

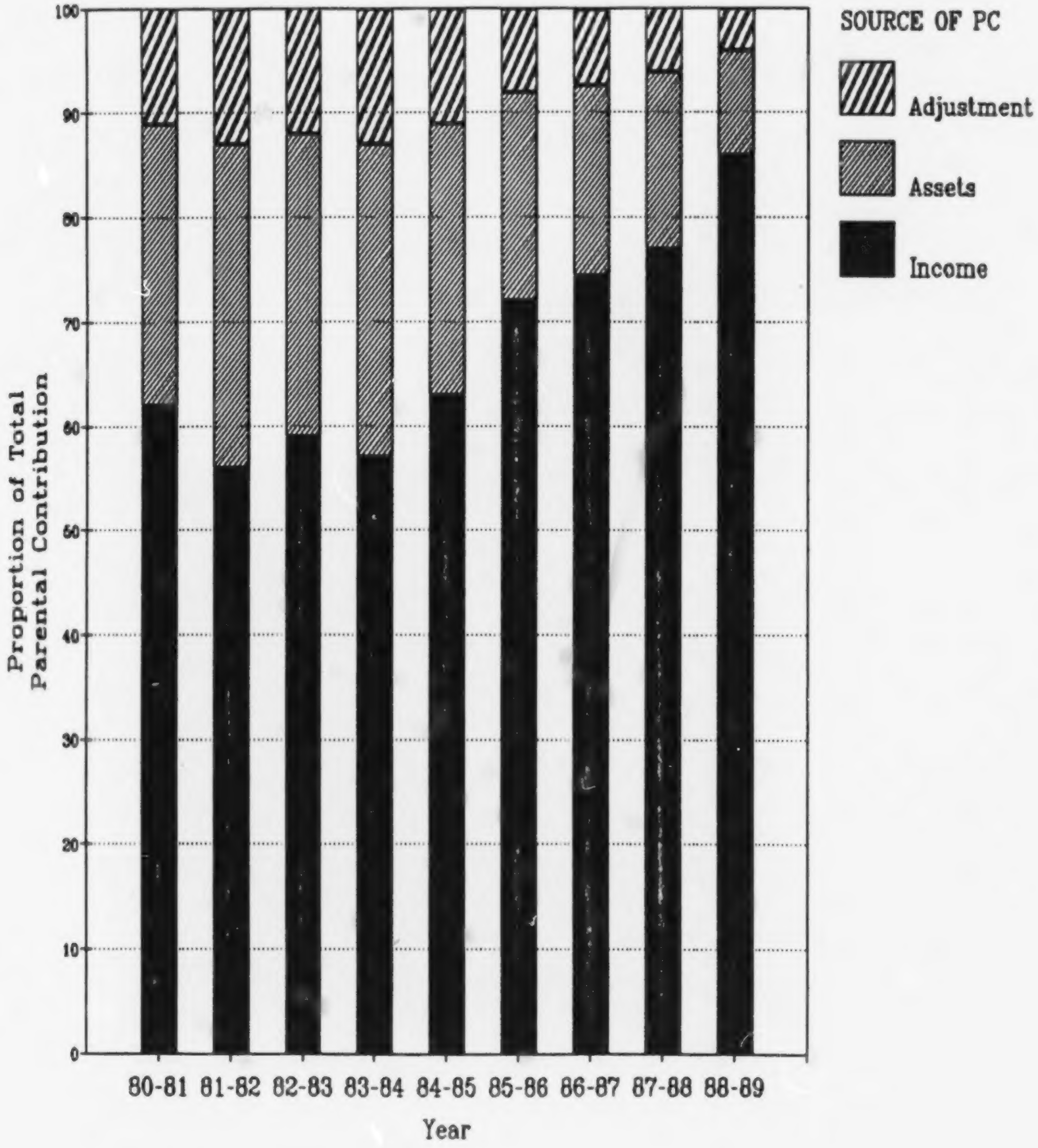
Example

Let us suppose that we calculate the direct and indirect costs of college attendance for a student to be $8000 per year. In this case, if the student's expected family contribution is greater than or equal to $8000, the student will not be eligible for need-based financial aid. Under need analysis, the student's family will be expected to pay for all of the budgeted direct and indirect costs of college attendance. (In need analysis, other costs of college attendance faced by students such as opportunity costs, risk costs, and financing costs are excluded.)

Then the question arises: How many children live in families where the income and the assets of the parents yield an expected parental contribution that is equal to or greater than the $8000 college cost level?

In this study we will focus on parental income because of the emphasis placed on income in assessing family ability to pay for college. (See Figure 1.)

FIGURE 1
SOURCES OF EXPECTED PARENTAL CONTRIBUTION
UNDER THE UNIFORM/CONGRESSIONAL METHODOLOGIES
1980-81 TO 1988-89



Analysis and Data

Three sets of data were compiled and linked for this study:

1) College attendance costs were compiled from Department of Education, ACT, and California Student Aid Commission surveys of institutional charges and student expenditures.
2) Expected parental contributions were tabulated from ACT records for dependent undergraduates who had filed a Family Financial Statement and for which an expected parental contribution had been calculated under the Uniform Methodology (Congressional Methodology beginning in 1988-89).
3) The distribution of children by family income was taken from Current Population Reports prepared by the Census Bureau.

Once assembled, the analyses of these data sets was a straightforward proposition. Any given college budget had a corresponding and identical expected parental contribution from income and assets (and based on average family size, number in college, and other factors for that family income level). That expected parental contribution had an average family income associated with it. The family income, in turn, could be located on a distribution of children by family income to determine the proportion of all American children in families that fell below and above that family income level.

The analysis described above was applied to six types of college enrollment situations (public and private 2-year, 4-year, and university), for the eleven year period from 1977-78 through 1987-88.

Findings

The key finding from this study is that about five out of six American children would require financial aid to be able to attend the least expensive college if all were to do so today. That is, their family incomes are such that the expected parental contribution from need analysis is less than the sum of the direct and indirect costs of attending a public 2-year college. (See Figure 2.)

The least costly form of college in 1987-88 was a public two-year college where nine-month direct and indirect attendance costs averaged $6023. The expected parental contribution from income and assets of $6023 that would enable a family to finance college from its own resources corresponds to a parental income level of approximately $49,866 in 1986 (base year). Children from families below this income level would be eligible for student financial aid if they chose to attend college. In 1986 (base year) income, 18 percent of all children lived in families that had higher income levels--23 percent in married couple families, but less than 2 percent in single female headed families.

Since 1977-78, the proportion of American children living in families that could afford to send their children to college without financial aid has fluctuated between 11 percent and 22 percent. The proportion was highest in 1979-80 at the end of a period of economic expansion, and lowest in 1981-82 during economic recession.

By 1987-88, the average direct and indirect costs of attending a private university had risen to $15,411. Converted by the Expected Parental

Figure 2
Distribution of Children by Family Income
Compared to Income Required to Finance College Budgets
1987-88 College Budgets, 1986 Family Incomes

```
Average Cost           Total Family
Institutions           Money Income

                                    /¦\
                        $100,000 ____¦+
                                     ¦MM
Private University ----------------->¦MM
                                     ¦MM
                                     ¦MM
                                     ¦MM
                                     ¦MM
                                     ¦MM   Numbers of Children:
                                     ¦MMM  O/F/M = 100,000 children
Private 4 Year College ------------->¦MMM  M=in married couple families
                         $75,000 ____¦MMM  F=in families with single female
                                     ¦MMM    head, no husband present
                                     ¦MMMM O=in other families, including
                                     ¦MMMMM  male head, no wife present
                                     ¦MMMMMM
Private 2 Year College ------------->¦MMMMMMM
                         $60,000 ____¦MMMMMMMM
                                     ¦MMMMMMMMMM
                                     ¦MMMMMMMMMMM
Public University ------------------>¦MMMMMMMMMMM
Public 2 & 4 Year ------>$50,000 ____¦O F MMMMMMMMMMM
                                     ¦MMMMMMMMMMMMMMM
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                                     ¦MMMMMMMMMMMMMMMMMMM
                         $40,000 ____¦O F MMMMMMMMMMMMMMMMMMM
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                         $30,000 ____¦O FF MMMMMMMMMMMMMMMMMMMMMMMMMMMMMM
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  -----------------------------------0----------------------------------
         College Costs                      Number of Children
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FIGURE 3
PROPORTION OF AMERICAN CHILDREN IN FAMILIES EARNING ENOUGH MONEY TO PAY FOR MINIMUM COST PUBLIC COLLEGE FROM PARENTAL RESOURCES, 1977-78 to 1987-88

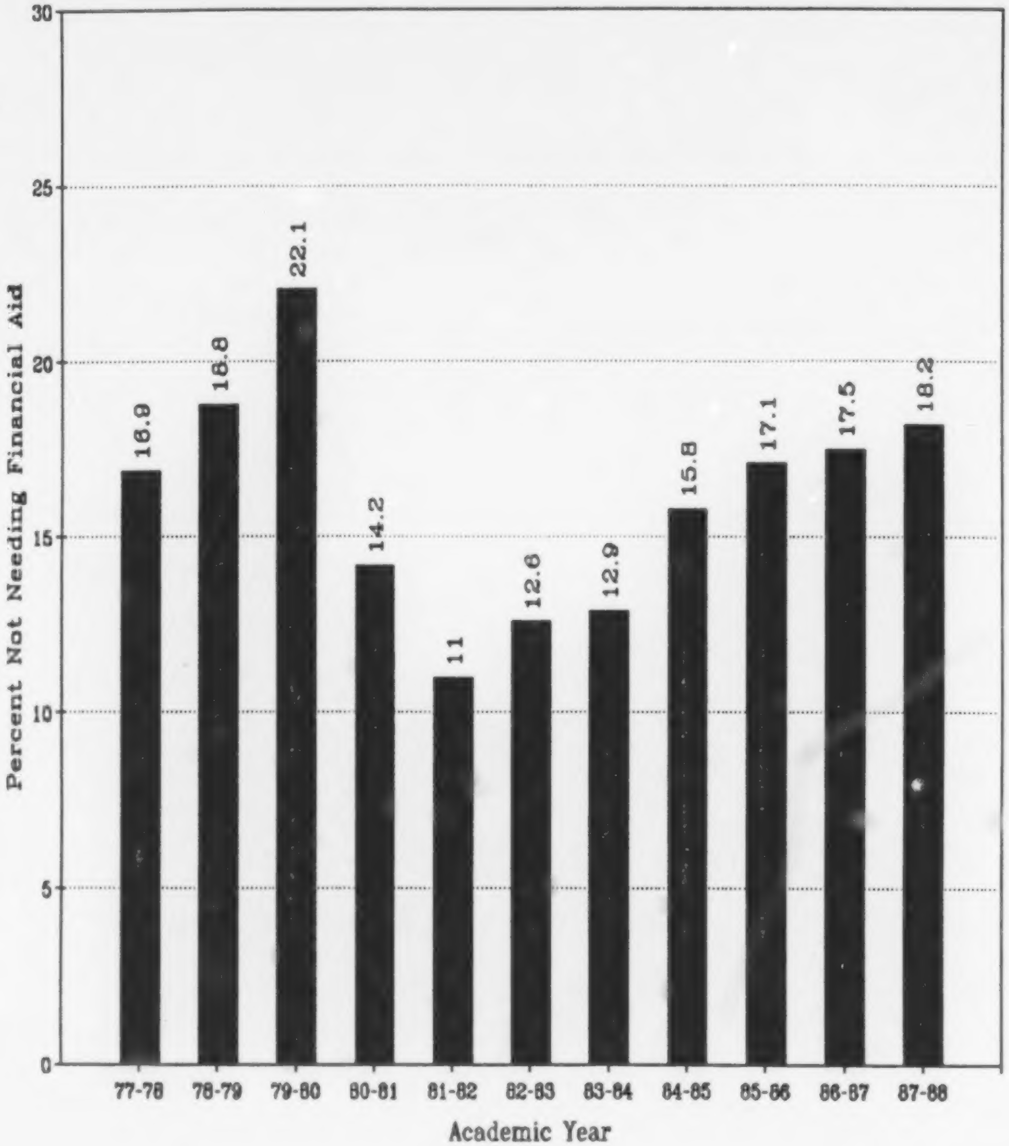
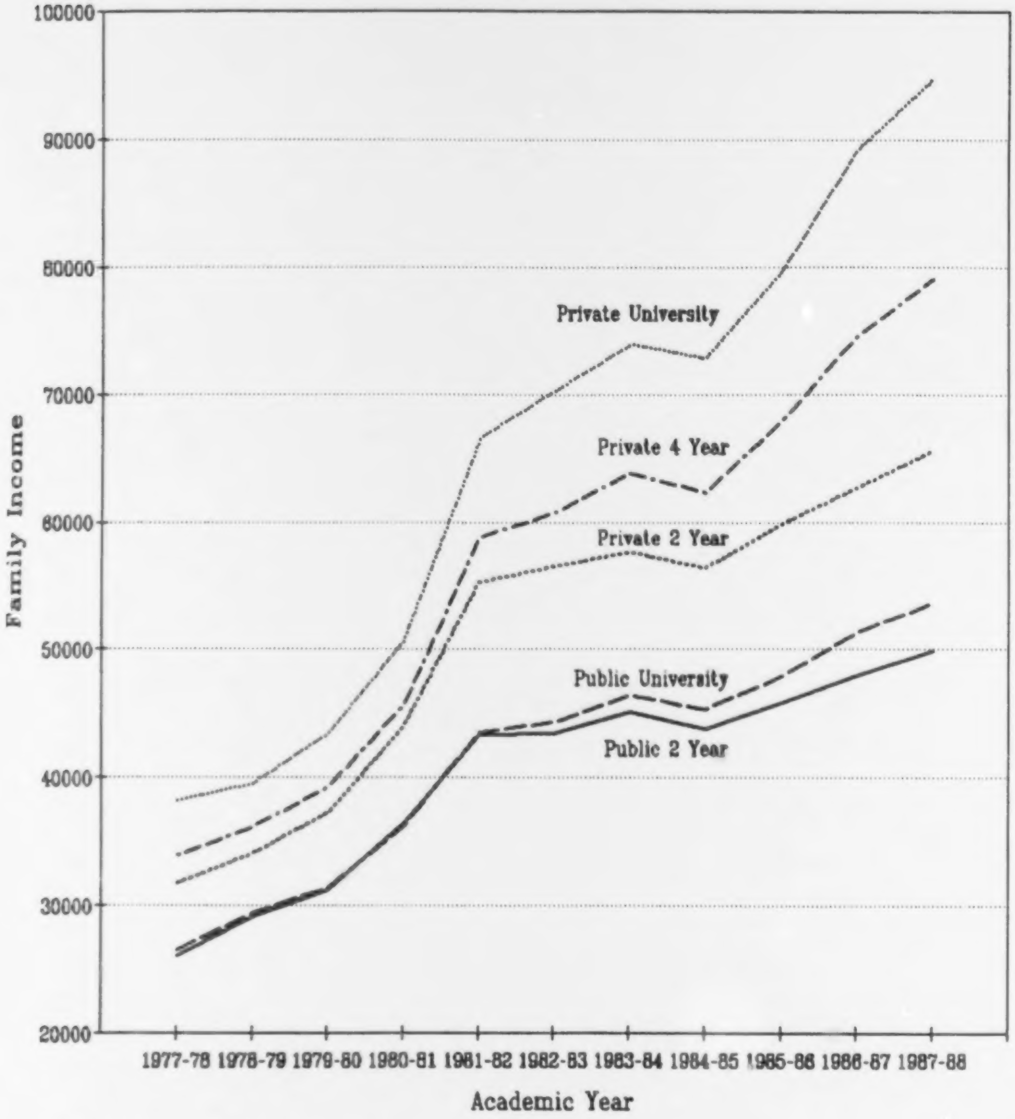


FIGURE 4
ESTIMATED FAMILY INCOME REQUIRED TO FINANCE COLLEGE ATTENDANCE COSTS AT PUBLIC AND PRIVATE COLLEGES
1977-78 TO 1987-88



Source: ACT FFS data prepared for U.S. Dept. of Education.

Contribution, this corresponds to a family income of about $94,800. Less than 5.5% of all American children live in families that earned this much in 1986.

Discussion

The preceding analysis should be very carefully considered by any who might wish to use its findings. This analysis is driven by data, and different data produce different results. Therefore, the data used in this analysis should be carefully considered before my results are accepted as I have presented them here.

First, I would urge particular attention to the college cost data, which is quite unlike what many formula driven financial aid programs assume cover the direct and indirect costs of college attendance. In my view, the California Student Aid Commission is to be commended for its regular surveys of students to determine what in fact students are paying to attend college rather than what some non-student thinks students ought to be paying to attend college, or published college budgets based solely on institutional charges for tuition, fees, room, and board.

Second, the Uniform Methodology represents a set of assumptions about what families ought to pay--not what they do pay--to send their children to college. It is used here because it has become the benchmark of need analysis. Even so, I chose to drop the student contribution portion of the expected family contribution because until 1988-89 and the Congressional Methodology came along, the student portion had even less relation to reality than did the parent portion. Most of the student contribution under the Uniform Methodology consisted of largely imaginary numbers.

Third, the circumstances of many families with children will change between now and the time when these children graduate from high school and are ready for college. Some will be better off, and some will be worse off, than they are now. One must be very careful, however, not to assume too much improvement in the economic circumstances of maturing children. The child poverty rates in the U. S. are increasing, not decreasing. Those children being raised by single mothers are unlikely to see their lot improve significantly unless the mother remarries. Younger families are starting off in life far below the jumping off level of their peers in the early 1970s. And finally, an economic recession would push many children who are now above the poverty level below that level as was the experience in the United States during the early 1980s.

Also, about a quarter of American school children will not graduate from high school with their peers, and therefore will not become eligible to attend college. Some of the drop-outs will complete high school later in life, but by then are more likely to be independent of their families and parents will not be required to help their children finance college attendance costs.

What we do know is that the economic circumstances of children are deteriorating, and that will affect their eligibility for financial aid to attend college.

WHY CAN'T WE AGREE ON WHAT'S HAPPENED TO U.S. LIVING STANDARDS?

Income and Wealth Trends Among the Middle Class

Richard C. Michel

The Urban Institute

June 7, 1989

Paper prepared for the National Council of Higher Education Loan Programs/National Association of State Scholarship and Grant Programs Research Network Conference, June 7-9, 1989, Washington D.C. The author is Director of the Income and Benefits Policy Center at the Urban Institute. This work was funded in large part by the Ford Foundation. Many of the ideas and the data in this paper draw upon work done jointly by the author and Frank S. Levy, Professor of Public Policy at the University of Maryland. The products of this collaboration are listed in the references. Additionally, Patrick Purcell of the Urban Institute is responsible for producing all of the asset and debt data and most of the income and earnings data in the various tables as well as for correcting various interpretive errors. All remaining errors are the responsibility of the author. The ideas in this paper do not necessarily reflect those of the Urban Institute or its sponsors.

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I. Setting the Context: The Debate Over Living Standards

Many recent studies have shown that since 1973, wage growth in the United States has experienced a significant downward shift.[1] Since earnings compose approximately three-quarters of all personal income, family income growth has correspondingly stagnated.[2]

In fact since reaching an historical high in 1973, inflation-adjusted family incomes have been on a roller coaster ride: falling, then rising to a new high in 1979, then falling again in the early 1980's before beginning a steady but modest recovery in 1983. In 1987, median family income stood at $30,853,[3] only about three percent higher than in 1979 after adjusting for inflation. This represents an average growth rate of less than half a percent per year, significantly less than the three percent per year growth rate experienced during the 1950's and 1960's.

The most serious effects of this stagnation in wage and family income growth occurred among members of the baby boom generation, who not only suffered from the size of their own cohort but had the misfortune of beginning their working careers just as American economic growth stalled. Two oil price increases in 1973 and 1979 accompanied by rapid general inflation not only depressed incomes but led to rapid appreciation in the cost of land and housing. The Federal Reserve Bank's efforts to control inflation by tightening monetary policy beginning in 1979 also led to historically high real interest rates,[4] effectively excluding many young, newly-formed families from the housing market.

The image of a generation of baby boomers beset with economic problems conflicts sharply with the descriptions of affluent yuppie families sometimes profiled in the media. Furthermore, it seems to be at odds with generally perceived notions of an unprecedented growth in the American economy since the 1982-83 recession. Some observers who have disagreed with this portrayal of a financially struggling generation of young middle class Americans point to rising consumption throughout the 1970's and early 1980's as evidence that family well-being did not deteriorate. Others point to methodological issues and the sensitivity of results to the selection of time periods.

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[1] For a full discussion of this, see Levy (1987), Chapter 5.

[2] Levy (1987), Chapter 2.

[3] Here, and throughout this paper, incomes, earnings and other dollar figures are adjusted to 1987 dollars by using the personal consumption expenditure component of the Gross National Product deflator. This is done to avoid overestimating the growth in inflation by using the Consumer Price Index. Many analysts have argued that the CPI overstated price growth in the late 1970's because of the way in which it accounted for housing costs. The method for calculating CPI growth was changed in the early 1980's to correct for this but a consistent historical CPI series is not available.

[4] The real interest rate can roughly be defined as the margin by which the nominal interest rate exceeds the rate of price inflation.

Who is right? The answer may be: all of the above. Statistics do not generally lie but they are often insufficient to reflect the complexities of real life. This paper presents some recent evidence that wage growth differed dramatically by education level and sex implying that some demographic subgroups fared reasonably well while the earnings growth of others languished. Furthermore, the paper examines net wealth data which seem to confirm a cohort effect in the economic status of families and show that education also makes a difference with respect to net wealth.

II. The Effects of Slower Economic Growth on Young Americans

This paper will hopefully clarify at least some of the confusion over what has happened to the economic status of American families in recent years and to outline what might happen in the future. Let us start with what economists do agree on.

We all agree that the 1950's and 1960's were extraordinary periods for the growth in American standards of living. Over the 26 years between 1947 and 1973, real wages (that is, wages after adjusting for inflation), grew by 2.5 to 3 percent per year. Family incomes never went more than three years without setting a new record. In the 1950's and 1960's, a young man moving from age 25 to 35, the career period in which wage growth is normally on its steepest path, could expect his inflation-adjusted earnings to rise by more than 100 per cent (see Table 1). During these decades, even a man passing from age 40 to 50, the career period when most major promotions are behind him, could expect his inflation-adjusted earnings to rise by 25 per cent or more.

More American families owned homes and cars than ever before. The number of families below poverty dropped from close to 9 million in the 1950's to 5 million by the early 1970's. Not surprisingly, given the robust economy, more than three-fourths of this decline in poverty occurred among families headed by a non-elderly male.

But all this wage and income growth stopped in 1973, coincident with the first major OPEC oil price increase. The disruptive effects of that price increase was exacerbated in the 1970's, first by a declining worker productivity that is still not well understood, and second by another OPEC-induced oil price increase in 1979.

What effect did this have on personal incomes? Young men passing from age 25 to 35 between 1973 and 1983 saw their real earnings rise by only 16 per cent rather than the 100+ per cent for similar young men in the 1950's and 1960's. Older men passing from 40 to 50 saw their real earnings decline by 14 per cent rather than increase by 25+ per cent. And an average young man aged 30 in 1984, that is someone born near the peak of the baby boom, was only earning between $17,000 and $18,000 per year, fully 25 percent less in inflation-adjusted dollars than a similar young man in 1973.

If wage stagnation had been the only economic problem of the 1970's, we might have remembered it as a difficult era and not a decade which had potentially permanent effects on a whole generation. But young people trying to form families in the 1970's faced two additional problems. First, rising oil prices, in addition to depressing domestic wages, drove up the cost of home fuel and gasoline. In the early 1980's, a young family was spending 54 per cent more on home fuel and 65 per cent more on gasoline and motor oil than a similar young family in the early 1970's. Second, and foremost, the cost of buying a home skyrocketed beyond the financial capabilities of many new families.

Table 1

Income Growth Among Males, 1949-83

Men Moving		Time Periods:		
From Age:	To Age:	1949-59	1959-69	1973-83
25	35	+ 118%	+ 108%	+ 16%
40	50	+ 36%	+ 25%	- 14%

Source: Tabulation from various Census data files reported in Levy and Michel(1986).

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In the 1950's and 1960's, for example, a young family with a single wage earner could buy an average home with monthly payments that were 14 to 16 per cent of its gross wage income. By 1973, this figure had risen to 21 per cent -- higher but still within the reach of most new families. But by 1983, it took 44 per cent of the earnings of single worker to buy an average home at prevailing mortgage rates. Furthermore, even improvements in interest rates after 1983 have been all but neutralized by rising home prices. In 1987, it still took 40 per cent of a single earner's wages to buy an average home.

How did young families manage to cope with these challenges? The answer seems to be through a series of mostly short-term demographic and financial adjustments which allowed them, at least for a time, to maintain their standards of living in the face of stagnant income growth.

The principal adjustment was that second earners in families entered the labor force in remarkably high numbers. By the mid-1980's, more than two-thirds of all young wives were working, contrasting to less than half as late as 1973 (and less than a third during the 1950's).

Young middle class persons also postponed getting married and when they did marry, they postponed having children or had fewer of them. The age of first marriage for young men and women rose significantly during the 1970's to the highest levels since the early part of this century. And the average number of children in young families dropped by almost one-third between 1973 and 1983.

These changes were of course not solely motivated by economic decisions; some were part of positive social trends, such as the emerging labor force participation of women. But these trends were most certainly accelerated by economic stress. And the demographic adjustments just described permitted the national economic figures to show higher per person income and consumption; afterall there were more earners in the family trying to maintain total family income and there were fewer family members to divide into both income and expenditures.

Young families also made other adjustments, some purely financial. They borrowed down payments from relatives. They bought smaller homes and condominiums with fewer amenities. They saved less and they borrowed more for non-housing expenses than previous generations.

These latter adjustments may have had an impact on another aspect of living standards, specifically on net wealth. The wealth position of families is often regarded as a measure of economic status that is equal in importance to income. A simultaneous deterioration in income and wealth could create additional hardships for young families and further undermine their standard of living. It may be useful here to discuss how wealth plays a role in the evaluation of economic well-being.

For most families, income is the primary measure of well-being since current consumption is paid for from income flows. But wealth also plays a major role in determining the financial stability of families.

The purpose of wealth varies considerably among individual families but for most it is to provide some protection against future fluctuations in either income or consumption. Fluctuations in income occur because of events such as retirement or unemployment. Fluctuations in consumption occur because of planned-for events such as home purchases or children's educational needs or unplanned-for events such as health problems. The greater the wealth of a family, the more securely it is protected against deteriorations in its economic status because of an unanticipated severity in these occurrences. Thus, the measure of wealth, and particularly of wealth after deducting debts, becomes an important gauge of the well-being of individual families or groups of families.

Economists disagree on many aspects of wealth analysis: how to measure it, whether to count as wealth social security and other deferred pension income, even why individuals accumulate wealth in the first place (i.e. - do they plan to leave bequests to their heirs?). For the average family, however, the definition of wealth is straightforward. The single most important component for a homeowning family is the equity in its principal residence. Add to this assets such as savings accounts, stocks and bonds, other real property, interest in a business, art objects and other material holdings and we have a conventionally accepted profile of the wealth status of a household. Of course, total family debt must be subtracted from this to obtain net wealth. For purposes of this report, we will use this straightforward definition of net wealth.

Wealth is accumulated in several ways including savings, the appreciation of assets, and inheritances. But except for inheritances, most of these processes require the passage of time. Thus the older a person is, the more likely he or she is to have larger wealth holdings, all other factors being equal.[5] Age is therefore a critical element in the distribution of wealth across the population.

One means of examining the relative economic well-being of a generation is to examine the distribution of wealth holdings across age groups. Several important studies have generated such distributions.[6] But in almost every case, the studies used somewhat different measurement concepts of net wealth.

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[5] Inheritances are popularly thought to be a major source of family wealth but Avery and Elliehausen (1986) report that 93 percent of all families indicate that more than one-half of their assets came from savings or from earnings.

[6] Katona, et al. (1963), Weicher and Wachter (1986), and Greenwood and Wolff (1988).

In general, all used the same components of gross wealth and debt, including home value less mortgages plus or minus other financial holdings and obligations but excluding social security and defined-benefit pension wealth. The most common differences are in the sample design and in the precise questions from the base surveys themselves but there are some differences which have been introduced by the analysts. Some analysts have discarded observations they regarded as inconsistent, some have controlled to National Income Accounts data and some have used medians instead of means, which can be substantially different because of the skewed distribution of wealth.

While we cannot adjust for all the variance in measurement techniques, there are ways to analyze what these studies show about the distribution of assets over time that roughly control for their differences. One method of controlling for differences is simply to compare changes over time only within studies, that is to measure changes between time periods for which net wealth has been calculated in exactly the same manner. Fortunately, there are three such groupings embedded in the studies noted above. These these groupings provide us with measures of change for approximately each ten years since 1953. Katona (1963) can be used to measure changes from 1953 to 1962. Greenwood and Wolff (1988) can be used to measure changes from 1962 to 1973 to 1983. Further analysis for a briefer period from 1977 to 1983 can be derived from Weicher and Wachter (1986). The results of these groupings are shown in Table 2.

What do these data tell us about shifting distributions of net wealth since 1953? A careful examination of the data in Table 2 yields the following story.

This story begins with the fact that during the 1950's, the net wealth status of the youngest families deteriorated. Families headed by a person aged 25 to 34, for example, experienced an absolute decline of 27 percent in their real net wealth between 1953 and 1962. During this same period the absolute net wealth positions of families headed by a person aged 65 or more also deteriorated, while families headed by persons above 35 but below 65 generally improved or stayed the same.

During the 1960's, the net wealth of young families improved dramatically. The Greenwood and Wolff figures show that, for families headed by a 25-34 year-old, the absolute net wealth for these families rose by almost 73 percent during this period. In contrast, older families in this period maintained approximately the same level of net wealth.[7]

The positive growth in the net wealth wealth status of younger families reversed itself sometime between 1973 and 1977 and the decline continued at a rapid pace after 1977. For families headed by a person aged 25-34, the real value of net wealth declined by 12 percent in the period from 1973 to 1983 with more than 90 percent of the decline occurring after 1977.

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[7] There is an unexplained and perhaps spurious decline in the absolute net wealth of families headed by a 55-64 year-old during the 1962-73 period.

Table 2

Growth Rates in Real Net Wealth by Age Group (1953-1983)

	Katona (1963)	Greenwood-Wolff (1988)		Weicher-Wachter (1986)
Families headed by persons aged:	1953-62	1962-73	1973-83	1977-83
<25	-28.7%	+110.8%	-40.0%	-33.8%
25 - 34	-27.0%	+72.7%	-12.1%	-11.4%
35 - 44	+14.6%	+17.0%	+43.1%	-8.2%
45 - 54	+2.4%	+2.1%	+131.6%	-5.7%
55 - 64	-.1%	-24.9%	+124.0%	+33.3%
65+	-18.5%	+3.4%	+50.9%	+41.6%
All Families	-1.9%	-1.4%	+57.8%	+15.3%

Sources: 1953-1962, 1953 Survey of Consumer Finances and 1962 Survey of the Financial Characteristics of Consumers (SFCC) in Katona, et al. (1963); 1962-1973 and 1973-1983, 1962 SFCC, 1973 merged Census and income tax return data and 1983 Survey of Consumer Finances (SCF), all in Greenwood and Wolff (1988); 1977-83, 1977 SCF and 1983 SCF, both in Weicher and Wachter (1986).

During this same period, families with heads older than 35 experienced remarkable increases in the real value of their net wealth, rising by rates varying from 51 percent (for the 65+ group) to 132 percent (for the 45-54 group). For families headed by a person aged 65 or more, almost 82 percent of the increase occurred after 1977. Although the total gain for these families was large, however, it was less than half of the gain experienced by families headed by persons between either 45-54 or 55-64.

These figures imply that younger families fared best with respect to net wealth accumulation before 1973 and have since experienced a decline in their relative and absolute net wealth holdings. Again then, it is the generation born after 1948 that seems to have borne the brunt of the major economic changes in since 1973. If we think about the context in which these changes occurred, it is not difficult to understand why.

As noted earlier, members of the baby boom generation were just beginning their working careers in 1973 when the first OPEC oil price increase took effect and the general slowdown in productivity began. Unlike their parents and their older siblings, many had not yet purchased a home by the time the second OPEC increase took effect and the Federal Reserve Bank tightened monetary policy to increase interest rates in 1979. With economic and demographic trends dampening their wage growth and central bank policies pushing mortgage interest rates up, many members of the baby boom confronted a financial squeeze. First, they were too young to have sufficient financial resources to take advantage of the high real interest rates. Additionally, their wage growth was sufficiently weak so that they were unable to save to accumulate financial wealth. Finally, rising mortgage interest rates combined with rising real estate values to create barriers to their entrance into the housing market.

Many of the members of the generation were therefore in a real but subtle economic decline compared to their parents' generation. They were able to maintain their consumption but with far less comfort than young families in the 1950's and 1960's. And the success they managed to achieve was bought largely through increased long-run financial insecurity and through accommodations to the quality of family life.

III. Does Education Make A Difference?

Given all this information, why then is there such disagreement among analysts, both economic and political, about how well American families are doing today? The answer lies in the fact that different groups of workers had very different experiences. In examining inflation-adjusted earnings changes between 1973 and 1987, several facts stand out (see Table 3 for complete details):

First, women consistently had greater wage gains or smaller losses than men. For example, women who were in the 45-54 age group and had a high school diploma saw their real wages rise by 6 percent between 1973 and 1987. Men in a similar age and education group saw their real wages fall by 5 per cent. Similar relationships exist across all age and education categories.

Second, older persons generally had greater wage gains than younger persons. For example, in the period from 1973 to 1987 while high school educated men between the ages of 45 and 54 were experiencing a 5 per cent decline in real earnings, similarly educated men between the aged of 25 and 34 were experiencing a 14 per cent decline in real earnings.

Finally, the lesser educated fared significantly worse than the better educated among both sexes. Women aged 25-34 without a high school education experienced a 4 per cent decline in real earnings between 1973 and 1987, while similarly aged women with a college education experienced a 12 per cent gain. Men aged 25-34 without a high school education experienced a 18 per cent decline in real earnings between those years, while similarly aged men with a college education experienced only a 2 per cent decline.

One question to ask is whether any of these trends have turned around since 1982, the beginning of the recent economic expansion. The answer, as shown Table 4, is apparently not.

Women's earnings growth continues to outpace men's by a considerable margin across all education groups. For example, between 1982 and 1987, the inflation-adjusted earnings of women with a high school education grew by more than 4 per cent while those of similarly educated men grew by only a little more than one per cent.

Better educated persons continue to experience dramatically higher earnings growth than less educated persons. Among all men, those with at least some college education saw their inflation-adjusted earnings rise by a little less than 8 per cent while those with only an elementary school education saw their earnings rise by less than one per cent. College-educated women also experienced significantly higher gains than less educated women.

Finally, lesser-educated younger men continued to experience declines in their inflation-adjusted earnings. The group of men between the ages of 25 and 34 with an

Table 3

Changes in Mean Individual Earnings for Men and Women Who Work Full Time, By Age and Educational Level: 1973, 1979, and 1987

(1987 dollars)

	Mean Earnings In: (Percent Earning $20,000 or Less)			Percent Change in Earnings Between:		
	1973	1979	1987	1973-1979	1979-1987	1973-1987
Men, 25-34						
<4 yrs. H.S	$21,169 (50.3%)	$19,793 (57.9%)	$17,337 (70.7%)	-7%	-12%	-18%
4 yrs. H.S.	$26,364 (27.0%)	$24,701 (36.0%)	$22,563 (48.6%)	-6%	-9%	-14%
1-3 yrs. col.	$27,345 (25.2%)	$26,316 (30.6%)	$24,972 (40.0%)	-4%	-5%	-9%
4 yrs. col.	$32,036 (14.7%)	$29,062 (23.6%)	$31,457 (22.4%)	-9%	+8%	-2%
>4 yrs. col.	$35,221 (11.1%)	$33,075 (17.7%)	$36,475 (17.4%)	-6%	+10%	+4%
Men, 35-44						
<4 yrs. H.S	$24,238 (40.3%)	$21,580 (51.9%)	$20,359 (56.7%)	-11%	-6%	-16%
4 yrs. H.S.	$29,736 (19.0%)	$28,992 (24.5%)	$27,215 (31.9%)	-3%	-6%	-9%
1-3 yrs. col.	$35,152 (12.1%)	$32,183 (16.9%)	$32,086 (21.9%)	-8%	---	-9%
4 yrs. col.	$43,331 (9.3%)	$40,555 (11.8%)	$39,439 (15.2%)	-6%	-3%	-9%
>4 yrs. col.	$49,367 (5.9%)	$44,483 (9.3%)	$46,443 (9.0%)	-10%	+4%	-6%
Men, 45-54						
<4 yrs. H.S	$24,506 (37.9%)	$23,907 (41.2%)	$23,701 (48.7%)	-2%	-1%	-3%
4 yrs. H.S.	$30,621 (19.8%)	$29,773 (23.5%)	$29,174 (29.8%)	-3%	-2%	-5%
1-3 yrs. col.	$36,858 (13.9%)	$33,608 (19.2%)	$36,509 (17.5%)	-9%	+9%	-1%
4 yrs. col.	$45,757 (8.4%)	$43,565 (10.9%)	$44,898 (14.7%)	-5%	+3%	-2%
>4 yrs. col.	$49,557 (6.7%)	$46,157 (8.5%)	$49,581 (10.3%)	-7%	+7%	---

Table 3, contd.

	Mean Earnings In: (Percent Earning $20,000 or Less)			Percent Change in Earnings Between:		
	1973	1979	1987	1973-1979	1979-1987	1973-1987
Women, 25–34						
<4 yrs. H.S	$12,519 (92.8%)	$12,533 (91.4%)	$12,027 (93.3%)	—	-4%	-4%
4 yrs. H.S.	$15,157 (83.1%)	$15,516 (81.0%)	$15,756 (79.9%)	+2%	+2%	+4%
1-3 yrs. col.	$17,971 (67.1%)	$17,783 (69.3%)	$18,673 (67.7%)	-1%	+5%	+4%
4 yrs. col.	$20,733 (47.9%)	$20,116 (57.8%)	$23,228 (45.3%)	-3%	+16%	+12%
>4 yrs. col.	$24,787 (23.4%)	$23,624 (39.1%)	$27,045 (31.0%)	-5%	+15%	+9%
Women, 35–44						
<4 yrs. H.S	$12,482 (90.9%)	$12,886 (90.5%)	$12,462 (91.7%)	+3%	-3%	—
4 yrs. H.S.	$16,006 (77.4%)	$15,963 (78.7%)	$17,128 (71.4%)	—	+7%	+7%
1-3 yrs. col.	$18,372 (65.5%)	$18,626 (67.8%)	$21,906 (51.7%)	+1%	+18%	+19%
4 yrs. col.	$23,283 (41.1%)	$21,391 (51.4%)	$24,514 (39.4%)	-8%	+15%	+5%
>4 yrs. col.	$29,166 (16.5%)	$27,298 (24.6%)	$31,038 (19.6%)	-6%	+14%	+6%
Women, 45–54						
<4 yrs. H.S	$12,851 (88.8%)	$13,009 (89.0%)	$13,303 (85.1%)	+1%	+2%	+4%
4 yrs. H.S.	$16,406 (77.3%)	$16,456 (76.6%)	$17,419 (70.9%)	—	+6%	+6%
1-3 yrs. col.	$18,769 (65.4%)	$18,683 (65.6%)	$20,787 (57.2%)	—	+11%	+11%
4 yrs. col.	$23,075 (39.3%)	$21,549 (51.4%)	$25,813 (38.4%)	-7%	+20%	+12%
>4 yrs. col.	$25,153 (31.0%)	$28,499 (23.0%)	$30,971 (20.6%)	+13%	+9%	+23%

[*] Earnings adjusted for changes in hours worked.
Source: Authors' tabulations from CPS microdata files.

Original Source: Frank S. Levy and Richard C. Michel, "Education and Income: Recent U.S. Trends," Urban Institute Report prepared for the U.S. Congress Joint Economic Committee, December 1988.

Table 4

Changes in Inflation-Adjusted Earnings for Men and Women By Age and Educational Level: 1982-87

(Full-time, full-year workers only)

	Percentage Change
All Men Over Age 18	
Elementary School or Less	+ .9%
1-3 Years of High School	+ 4.8%
4 Years of High School	+ 1.1%
At Least Some College	+ 7.6%
Men Age 25-34	
Elementary School or Less	- 7.7%
1-3 Years of High School	- .8%
4 Years of High School	+ 1.3%
At Least Some College	+ 6.1%
Men Age 45-54	
Elementary School or Less	+ 6.5%
1-3 Years of High School	+ 19.2%
4 Years of High School	+ 6.6%
At Least Some College	+ 9.7%
All Women Over Age 18	
Elementary School or Less	+ 3.9%
1-3 Years of High School	+ 6.1%
4 Years of High School	+ 4.5%
At Least Some College	+ 11.3%

elementary school education or less saw their inflation-adjusted earnings decline by almost 8 percent between 1982 and 1987. Those with a high school diploma experienced only a slight increase of a little more than one per cent in their real earnings. Those with at least some college, on the other hand, did reasonably well with more than a 6 per cent increase in real earnings.

These figures give us some indication of why there is so much confusion about how well Americans are doing. If you were older, say above 40, your income and earnings experienced a slowdown in the 1970's but have rebounded since the 1982 recession. If you had a college education, your earnings gains grew much faster than inflation from 1982 to 1987. If you were a female worker or in a family with a female worker, earnings growth was very strong and consistent. So even though the earnings of female workers continue to be considerably below those of male workers, there have been some significant gains in the past decade and a half and those gains seem to be particularly strong since the 1982 recession.

Thus, for a large portion of our population the notion of stagnant or declining incomes is an alien one. And because some groups, such as the college educated, have done so very well, the national average income figures show a much more positive result than the numbers in Tables 3 and 4.

But these national figures disguise a very important trend among the less educated generally and among less educated young men in particular. If you were a young male with less than a high school education in the 1970's and 1980's, your economic situation continued to deteriorate even in the midst of the prolonged general economic recovery. Even if you completed high school, your earnings increases just about kept pace with inflation. Furthermore, this age group has now gone through 15 years without experiencing any significant gains in earnings.

This is not a trivial problem. In 1986, 55 per cent of all persons between the ages of 25 and 34 had a high school education or less. The full social and economic implications of this are yet to be fully realized and may be quite subtle. Some preliminary signs are not good.

As Table 5 shows, the poverty rate among college-educated males aged 22-34 is nearly half that of all males, the poverty rate among males who do not complete high school is more than two and a half times as high. Additionally, the number of males aged 22 to 34 with incomes below the poverty level was nearly 1.8 million higher in 1987 than in 1979. And while there has been some improvement since 1982, the improvement among young males who did not complete high school is much less than among the rest of the population.

William Julius Wilson, a respected academic who has spent many years studying poverty among blacks in Chicago, has argued that some troublesome social trends with long-

Table 5

The Poverty Status of Young Males by Education Level, 1979-87
(All Males Aged 22-34 in Units with Income Below Poverty)

Education Level	1979 Number (000)	 Rate	1982 Number (000)	 Rate	1987 Number (000)	 Rate
Did Not Complete High School	499	15%	982	28%	939	24%
Completed High School	494	6%	1,007	10%	879	8%
Completed at Least Some College	477	4%	703	6%	628	5%
Other Poverty Rates:						
All Persons		10%		13%		11%
All Men		8%		11%		9%

Sources: Author's tabulations from various Census P-60 reports on poverty in the United States.

run consequences may develop when young males experience economic difficulties.[8] In very simple form, Wilson believes that when young males do not earn sufficient incomes to support a family, young females choose not to marry them, even though they may continue to bear children.

If Wilson is right and the earnings deterioration of young men both black and white continues, then we may look to a future where family structure changes significantly across all of society and not just in the low-income urban areas. This may inevitably lead to an increase in young men with poor attachments to the labor force who therefore have little chance for economic advancement. It means more female-headed families with mothers working to support their children on one income, an income which may be as much as 30 per cent less than that earned by groups of similar males. For some of these families, it means increased reliance on social services and on benefit programs such as Aid to Families with Dependent Children and Food Stamps. For a generation of lesser educated Americans, it may mean the end of upward mobility as we came to know it in the 1950's and 1960's.

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[8] See Wilson and Neckerman (1986).

IV. An Unpromising Future Outlook

What does the future hold? Is there any way to reverse the downward income slide among young men? Economists often cannot agree on what happened in the past let alone what will happen in the future. But there are some obviously problematic forces currently at work in the general economy.

It is most certainly true that in the short run, the next three to five years, things do not look good for young wage earners. Worker productivity has not grown as rapidly as we might have hoped since the 1982 recession. Oil prices have risen again and if energy pundits are correct, this upward trend will accelerate in the 1990's. Interest rates have also gone up as the Federal Reserve Bank has tightened credit in an effort to keep inflation under control. And the much- discussed problems of deficits and debt, both domestic and international, are constant reminders of unpaid obligations that will eventually come due. These factors can only act to depress the incomes and standards of living of families with heads at all age and education levels in the near term. But if the recent trends continue, it will be the incomes of families headed by less educated persons which will suffer the most.

The signs are no more promising on the net wealth front than on the income front. While wealth data are not collected as regularly or as completely as income and earnings data, recent surveys confirm that young families headed by more educated persons are in a more comfortable net wealth position than those headed by less educated persons. Table 6 shows that the more educated, even when they are young, have greater net wealth and a stronger and more diversified wealth portfolio than the less educated.

The net wealth of those families headed by a young person with at least some college was 66 percent higher in 1983 than that of families headed by a young person with a high school education or less. In general, the more educated families held more kinds of assets than the less educated. They were twice as likely to have Individual Retirement or Keogh accounts and business assets and more than twice as likely to have illiquid assets such as precious metals, jewelry or art. The value of the their liquid assets was more than twice that of the less educated and, while they held more debt for things such as investments, the size of their retail debt was considerably smaller.

More educated families also tend to have more expensive homes and more mortgage debt, though the net equity in their homes was 27 percent higher in 1983 than that of less educated families. A critical point shown in Table 5 is that a higher percentage of young families headed by less educated persons owned their own homes: 49 percent of those with a high school education or less own their home vs. 44 percent of those with some college. While this difference is probably not significant from a statistical perspective, it does show

Table 6

The Composition of the Net Wealth of Baby Boomers By Education Status in 1983 (1986 dollars)

	High School or Less:		Some College Or More:	
Assets	Value	Percent of Age Group Holding Asset or Liability	Value	Percent of Age Group Holding Asset or Liability
Home Value	$22,392	49%	$32,277	44%
Liquid Assets	1,552	82%	3,341	84%
IRA's, Keoghs, etc.	212	7%	509	13%
Other Financial Assets	3,097	32%	7,399	45%
Illiquid Assets	218	8%	2,097	17%
Business Assets	4,849	5%	7,947	9%
Total Assets	$32,520		$53,570	
Liabilities				
Home mortgage	$ 7,980	33%	$12,239	34%
Retail Debt	2,015	50%	780	52%
Other Debt	674	24%	4,219	32%
Total Liabilities	$10,369		$17,238	
Net Wealth	$21,851		$36,332	

Source: Tabulated by the author from the 1983 Survey of Consumer Finances; adjusted to 1986 dollars using the personal consumption expenditure portion of the GNP deflator.

Note: Assets and liabilities are averaged across the entire age group irrespective of ownership.

that the tendency to make a home the linchpin of net wealth is at least equally strong among the less educated young as among the more educated.[9]

Furthermore, the importance of home equity appears to be greater among the less educated. Among those families headed by a person with a high school education or less, home equity accounted for more than two-thirds of net wealth. Among those families headed by a person with at least some college, home equity accounted for about 55 percent of net wealth. The reliance on home equity seems to remain strong among the lesser educated as the family head ages while it decreases substantially among the more educated. In 1983, for example, among family heads in the 55-64 category, home equity accounted for 64 percent of net wealth among the less educated and only 40 percent among the more educated.

This implies that throughout their lives, persons with a high school education or less are primarily dependent upon increasing home values and decreasing mortgage loan balances to sustain the growth in their net wealth. Because they begin with a more diversified wealth portfolio and because their income is higher, persons with some college have a greater number of opportunities to realize growth in their net wealth even if there is a slump in the housing market.

In some senses then, the less educated have all their eggs in one basket when it comes to net wealth growth. If real prices of houses collapse, for example in response to a downward shift in housing demand during the 1990's as some analysts have predicted,[10] these families could experience a serious deterioration in their net wealth positions.

There is not much individuals or families can do to affect these powerful macroeconomic forces. The best advice that one can give them is not a comfortable one. Middle class families headed by lesser educated persons must lower their financial expectations. They must accept a lower standard of living, perhaps lower than the one their parents experienced.

But their are some actions that individuals can take to better their own prospects. First, it must be clear from this paper and others that the financial returns to completing a college education are now quite considerable.[11] In 1987, the earnings of young men and women who had not completed high school were less than half the earnings of young men and women who had completed at least some college. For those who have the abilities and initiative, a college education is the surest way to compete well in the labor market. The same will be true for the children of today's young parents.

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[9] This tendency seems to be unchanged over time. Calculations by the authors from data provided in Lansing and Sonquist (1969) show that in 1962, 48 percent of families headed by a person with a high school education or less owned their home vs. 51 percent of families headed by a person with at least some college.

[10] See Mankiw and Weil(1988).

[11] See, for example, Blackburn, Bloom and Freeman (1989).

Second, it appears to be highly unlikely that single-earner families will be able to maintain their standards of living between now and the end of the century. Single-parent families have few options in this regard, but two-parent families have the option of becoming two-earner families in order to enhance their income prospects. Single-parent families (or, for that matter, single persons) may have to consider pooled living arrangements with relatives or other similar families to take advantage of the financial gains offered by having two adults working.

Third, and perhaps least palatable, families with low income prospects could voluntarily have fewer children. Data from the 1970's and early 1980's show that middle income families either postponed having children or had fewer of them. There was no similar change in child-bearing behavior among lower income families, however.[12] The notion of making a decision to have a child purely on financial grounds is disturbing to many families but it is an effective if unpleasant way to maintain family living standards.

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[12] For a discussion of the changing fertility rates by education level, see Levy and Michel (1987). For a more recent and dramatic review of this, see Herrnstein (1989).

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The Income Distribution of New Jersey Families with Children in College, 1977-1986: Data from State Income Tax Returns

Lutz K. Berkner
Research Coordinator
Office of Student Assistance
New Jersey Department of Higher Education
CN 540, Trenton, NJ 08625

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Sources for Student Income Distributions

Financial aid research tends to present a rather lopsided view of the income distribution of college students. Our basic sources for data are financial aid applications, which are typically filed by only about half of the college full-time undergraduates, and usually represent the bottom half of the student income distribution. The general rule is the higher the family income, the less likely that an aid application will be filed. A corollary rule is that the higher the tuition, the higher the income distribution of the applicants. A typical result shown in research based on financial aid applications is that the higher income students are attending the higher cost institutions. While this may be true, the data actually only shows that higher income families are more likely to apply for aid at high cost institutions than at lower cost institutions. In New Jersey, for example, only about one-quarter of the full-time undergraduates at low tuition community colleges apply for aid, compared to three-quarters applying for aid at independent colleges.

At the state level, the only generally available series which cover the entire range of the student income distribution are from the descriptive questionnaires administered as part of the College Board's SAT or the ACT admissions testing programs, which ask college-going seniors to indicate their family income. Typically, about one-fifth do not answer the question and it is unclear how accurate the responses of the rest are. In New Jersey, for example, the median income of the respondents has been remarkably close to the statewide median income of all families throughout the 1980's. This is rather surprising, since we know that higher income students are more likely to go to college in general, and lower income students are more likely to go to community colleges which do not require SAT's for admission. On the other hand, a higher proportion of high school seniors (about 70 percent) in New Jersey take the SAT's than actually go on to college (about 60 percent), and about 15 percent of those who take the SAT in New Jersey do not indicate any college to which the scores should be sent. This suggests that the "college-bound senior" income distribution will be lower than that for the freshmen who actually enroll.

At the national level, the Cooperative Institutional Research Program (CIRP) annually publishes the family incomes reported by a large sample of college freshmen. This has the same problem of reliability as the SAT questionnaire (how well do students know their family income?), but it surveys only those who actually enrolled as freshmen, and includes those who did not apply for financial aid.

Even when we have a source of student income data, it is difficult to find a source of family income data which will allow for an appropriate comparison. Ideally, we want to compare the income distribution of families with children in college to all families with college-age children. It is important to have a demographic control (such as families with college-age children) because both average family income and the presence of a college-age child are closely related to the age of the parents. Average family income rises with age (until retirement), as does the probability of having college-age children (up to about 55). In New Jersey, the average age of the parents of dependent undergraduates applying for aid is 48, which is also about the age when the years of peak earnings begin. What this means is that families with college-age children would tend to have a higher income distribution than families without college-age children, even if there were no difference in the college participation rates by income.

Taking this into account, Davis and Johns (1989) compared the CIRP freshman income data to the Current Population Survey (CPS) income reported by all families whose heads are aged 35-64, a group that is likely to have college-age children. They find that the median income reported by freshmen was very close to the CPS median income for all families with heads aged 35-64 in 1981; before and after that year the median income of freshmen was higher than the median family income. The advantage of this approach is that a focus on freshmen income distribution is a better measure of "access" than the income distribution of all students (see the caveats below). The disadvantage is that it compares data from two different surveys whose respondents do not have the same amount of knowledge about family income.

Every five years the Current Population Survey (Series P-20) publishes national data which directly compares the income distribution of all families with college-age children to those with children actually enrolled in college. Since it provides the appropriate demographic control, it allows for a precise calculation of national college participation rates by income. These rates are strongly and directly related to income: in 1986 only 14% of the lowest income families with children aged 18-24 had a child in college, compared to 56% for the highest income families (summarized in a graph by Ottinger 1989, p. 11). .

At the state level the kind of detailed combination of demographic and income data collected by the CPS is normally not available except for census years. In New Jersey, however, state income tax data is available which makes it possible to construct census-equivalent categories to compare the income distribution of New Jersey families with children in college to all families with children, although the important age data is not known.

The New Jersey state income tax is levied on gross income with very few exclusions (except for social security, unemployment and a portion of pensions income) or deductions. It does allow a $1,000 exemption each for the filer and spouse, for each dependent child under 18 or a full-time college student under 22, and an additional exemption for each dependent full-time college student. Comparable aggregate data by income categories showing the number of exemptions claimed for dependent full-time college students has been published annually since 1977, and provides a unique state-level series of data on the changing income distribution of families with children in college.

Tax Returns Versus Census and Survey Data

Income distributions based on all individual tax returns as the units of measure are not comparable to those derived from the census or the Current Population Survey. The census and the CPS give priority first to living arrangements and then to kinship in defining their basic units for tabulation, which are households and families. In the census any individual or group of people living together comprises a household; any two or more related people (of any age) living in a household is defined as a family. In contrast, tax returns give priority to the financial relationships and income streams of individuals and are only interested in living arrangements and kinship as evidence of financial dependency to justify tax exemptions.

Tax returns may, therefore, represent either households or families or individuals, including dependent children with their own earnings. However, by using the tax filing status and the type of exemptions claimed, it is possible to disaggregate tax return data into certain census-equivalent categories, such as married couple households, single parents, and married couple families with dependent children.

Table 1 shows the income distribution of all New Jersey tax returns in 1986, and then the distribution for each category based on filing status and dependents. Over one million tax returns (30% of the total) were filed for incomes under $10,000. However, nearly 800,000 of these were filed by single individuals with no dependents - which includes a wide range of individuals such as teenagers claiming withholdings from a summer job, students with part-time jobs, unmarried young adults with minimum wage clerical jobs, and widowed persons with pensions. Some of these represent single individual households, but many do not, and there is no way to classify them.

It is possible, however, to identify most of the census-equivalent family units, because they file their taxes as married couples or as single but claim an exemption for a dependent child. The cumulative distribution of each category in Table 1A shows the approximate median income for each group in 1986. The median income for the single individuals with no dependents was a little over $10,000, but this includes dependents with their own income. The median for single parents, unfortunately, was not much higher - only $15,000. For married couples with no dependents, which will include large proportions of the younger and older couples, the median was a little under $35,000. Married couples with dependent children were by far the best off, with a median family income in the low $40,000's. Combining all families with dependent children (married and single parents), the median drops to about $35,000, and it remains the same for all identifiable family units (married couples and parents). This is nearly 20% higher than the national median family income in 1986, which was $29,500. New Jersey has had one of the highest per capita and median incomes in the nation for many years.

The $35,000 median family income derived from the 1986 state tax data is somewhat lower than the $38,000 estimated from the 1986 CPS state sample by the New Jersey Department of Labor. The reason for this is not clear, but a comparison of the census-equivalent categories derived from the 1980 income tax data with the 1980 census data for New Jersey indicates that about 15 percent of the census "family" households cannot be identified from the tax returns (or did not file). The best numerical match is for the category of families with dependent children under 18. According to the 1980 census, there were 998,000 New Jersey families with children under 18. In that year 1,078,000 families filed tax returns claiming exemptions for dependent children, but that included 159,000 with children under 22 in college. If we assume that approximately half of these (80,000) had both children under 18 and children 18-21 in college, then we arrive at the census number of 998,000 families with children under 18. The individual count of related children under 18 in 1980 is also very close: 1,963,000 according to the census and 1,970,000 claimed as non-college dependent child tax exemptions.

Caveats

In the following analysis, we will therefore be comparing the income distribution of all New Jersey families with dependent children under 18 to that of New Jersey families with dependent children in college (usually 18-21). Since the tax data does not allow for a direct comparison (all those with children 18-21 compared to those with children in college), it is important to remember that the results will be biased towards overstating the difference between the two groups because age and income are so closely related. That is, families with only young children will have a lower average income than families with college-age children.

Second, the income distribution of families with children in college is not the same as the income distribution of college students. In New Jersey, approximately one-quarter of the in-state full-time undergraduates are over age 21. Many of these are self-supporting ("independent") and rely on their own income, which is typically quite low. Since they cannot claim a college student tax exemption for themselves, they cannot be identified from the tax return data. This will also contribute to a bias in overstating the student income distribution. For example, a 1982 survey of New Jersey high school seniors conducted by the Department of Higher Education (1983) came up with the surprising result that the (student-reported) family income for those intending to go to community colleges was higher than those intending to go to in-state four-year colleges. However, since nearly half of the community college freshmen were not current year high school graduates, and many of these were self-supporting, the survey did not represent an accurate picture of the income distribution of community college freshmen as a whole.

This is closely related to a third caveat, that the income distribution of all families with dependent children in college (any number at any age 18-21) will be higher than the income distribution of college freshmen. Income distributions of entering college freshmen (like the CIRP survey) give equal weight to students at two-year as well as four-year colleges, and do not reflect the impact of income on college retention. A low income student is more likely to attend a two-year college and more likely not to complete four years of college than is an upper middle income student. As freshmen they are both counted only once, but as "college students" the same upper middle income student is much more likely to be counted again three or four times (each year attending college), while the low income student is likely to be counted only once or twice. That is, there is a cumulative effect of the relationship between income and length of college attendance which also tends to raise the income distribution of all college students above that of all freshmen.

Finally, the income distribution of New Jersey families with children in college is not the same as that of New Jersey families with children in colleges located in New Jersey. New Jersey has the highest rate of college out-migration in the continental United States (only Alaska's higher), with about 40 percent of college freshmen from New Jersey enrolling at out-of-state colleges. This out-migration is directly related to income: most low income students tend to stay in-state while the majority of upper middle income students attend college out-of-state (New Jersey Department of Higher Education 1983). That means the income distribution of New Jersey students attending New Jersey colleges is much lower than the income distribution of New Jersey families with children in college anywhere. It is not possible to make this distinction from the tax return data.

In summary, this is not the income distribution of all students attending college in New Jersey. It is the income distribution of New Jersey families with dependent children (one or more) aged 18-21 who were full-time college undergraduates anywhere during the calendar year, compared to all New Jersey families with children under 18. Since the two are not directly comparable, there will be a bias in the data overstating the difference. The purpose of using families with children under 18 as the unit of comparison is that they represent a census-equivalent category which can be identified from the tax return data and which appears to be as completely represented in the tax returns as in the census.

Income Distributions in 1977, 1980 and 1986

Table 2 compares the income distribution of all New Jersey families with dependent children (under 18 or in college and under 22) to those with dependent children in college as reported in the 1977, 1980 and 1986 state tax returns, using three different ways to compare the trends in the income distributions: (1) current dollar income as reported that year; (2) constant dollar income adjusted by the Consumer Price Index to inflate the 1977 and 1980 incomes to 1986 levels, and (3) approximate income quartiles for that year into four categories ranging from the 25 percent with the lowest income to the 25 percent with the highest income (for these preliminary results the interpolation method used was not refined enough to get exactly 25 percent in each quartile).

The values used in the current and the constant income categories represent the approximate dollar boundaries of the family income quartiles in 1986. That is, in 1986, the lowest quartile of New Jersey families with dependent children had incomes under $19,000; the second quartile had incomes between $19-$35,000 (the median); the third quartile had incomes between $35-$55,000; and the highest quartile had incomes over $55,000. For 1986, therefore, the family income distribution is exactly the same using either current 1986 dollars, constant 1986 dollars, or the quartiles.

The current (nominal) income of families with dependent children rose substantially in the ten years after 1977, reflecting general price and wage inflation. In 1977, the median income was about $19,000; in 1986 the median was about $35,000. In 1977 only one percent of the families had incomes over $55,000; in 1986 one-quarter of the families had incomes over $55,000. In nominal dollars, the entire family income distribution had shifted up one quartile during the ten years.

The same kind of shift is seen among the families with children in college: the proportion with current incomes under $19,000 dropped from 27 percent in 1977 to 9 percent in 1986; the proportion with current incomes over $55,000 rose from 4 percent to nearly half (47 percent) in 1986! This should emphasize the folly of using fixed income categories to set policy and eligibility criteria in financial aid. Between 1981 and 1986, for example, the Guaranteed Student Loan program exempted students with family incomes under $30,000 from need analysis to establish loan eligibility. In 1981 nearly half of the New Jersey dependent students came from families with incomes under $30,000; by 1986 only twenty percent had incomes under $30,000.

The second set of numbers in Table 2 are the constant dollar incomes, which show the effect of adjusting the 1977 and 1980 incomes for inflation using the 1986 Consumer Price Index as a base. For all New Jersey families with dependent children, this results in bringing out a well established national trend: there was a growing disparity between the lowest income and the most affluent families, and a constriction in the middle. In 1986, one-quarter of the families had incomes over $55,000; a decade earlier only 17 percent had had gross incomes equivalent in purchasing power to $55,000 in 1986. The number of families in the middle ranges ($19-$55,000 constant) decreased by about 90,000 during the decade, while there were increases in the number of affluent families (about 90,000 more) and low income families (about 45,000 more).

The change in the income distribution of families with children in college was also away from the middle, but the shift was primarily upwards. Using constant dollars, over ten years the proportion of families with children in college in the middle income categories ($19-$55,000 constant) declined from 53 percent to 44 percent, the proportion in the upper income category (over $55,000) increased from 38 percent to 47 percent, but the proportion of low income families with children in college was about the same in 1986 as it had been in 1977 (9.3 percent to 9.2 percent).

This trend was not continuous, however. Between 1977 and 1980, years of high inflation, the constant dollar income distribution of both families with dependent children and families with children in college shifted down. The proportion of families with children in college from the lowest constant dollar income category increased one percentage point (from 9.3 percent to 10.2 percent), the proportion from the middle ranges grew by nearly four percentage points (from 53.0 percent to 56.7 percent), and the proportion in the over $55,000 category dropped by nearly four percentage points (37.7 percent to 34.2 percent).

The proportion of families with children in college below the constant dollar median of $35,000 was 29.4 percent in 1977, 30.8 percent in 1980, and only 26.1 percent in 1986. This suggests that the late 1970's were a period of increased access to college for low and moderate income families in New Jersey, but that the gains of the 1970's were lost during the early 1980's. It is similar to the pattern reported by Davis and Johns (1989) using national data for the family incomes reported by college freshmen, although their analysis used quartiles rather than constant dollar categories.

When the New Jersey family income data is analyzed by quartiles (lowest 25 percent to highest 25 percent of families with dependent children) rather than using a constant dollar adjustment, this pattern seems to disappear. Using quartiles, the proportion of families with children in college representing the lowest quarter of all families with dependent children in New Jersey, dropped continuously: from 11.0 percent of college families in 1977 to 10.2 percent in 1980 to 9.2 percent in 1986. The second quartile of moderate income families with children in college grew slowly but continuously, however, from 15.8 percent to 16.4 percent to 16.9 percent. Together, the two lowest quartiles represent the proportion of families with children in college whose income was below the median for all families with children: this was 26.8 percent in 1977, 26.6 percent in 1980 and 26.1 percent in 1986.

Table 3 shows the calculation of college participation rates for families with dependent children for the three years. Overall, the percentage of New Jersey families with dependent children who had children in college rose from 12.7 percent in 1977 to 14.7 percent in 1980 and then dropped slightly to 14.4 percent in 1986. Using either constant dollars or quartiles, the participation rate increased in all income groups between 1977 and 1980, and then declined or stabilized. The participation rate of the lowest income quartile families rose slightly between 1977 and 1980 (from 5.4 percent to 5.8 percent) and then dropped to 5.2 percent in 1986. The rate for the second or moderate income quartile increased much more between 1977 and 1980 (8.0 percent to 9.6 percent) and increased slightly to 9.8 percent in 1986. It is uncertain, however, how much these rates reflect changes in college enrollment behavior as opposed to changes in the underlying demography (shifts in the number of families with young children).

Conclusion

The income distribution of New Jersey families with children in college is substantially higher than that of all New Jersey families with dependent children, and has been about one quartile higher for a decade. That is, nearly three-quarters of families with children in college have incomes above the median for all families with children. Partially this reflects the close relationship of income to age, since families with college-age children will have higher average incomes than families with young children, but low-income families are still clearly under-represented in the dependent college population. Among upper middle income families with children, about one out of four has a child in college; among low income families it is one out of twenty. A complete picture of the income distribution of college students, however, would be lower than this data shows, because self-supporting, older students are not included. The income distribution of the students attending in-state colleges would also be much lower.

One clear trend is that there was no sustained increase in college participation for low income families in New Jersey during the ten years between 1977 and 1986. Low income family college participation rates did increase slightly between 1977 and 1980, but not as much as in the middle income groups, and then participation fell again. Perhaps the change in the absolute numbers are the most telling: the number of New Jersey families with children in college increased by 25,000 between 1977 and 1986; none of the increase came from the families in the lowest income quartile; nearly all of the increase (24,000) came from families with 1986 constant dollar incomes over $55,000.

NEW JERSEY DEPARTMENT OF HIGHER EDUCATION

STATUS OF NEW JERSEY STATE INCOME TAX FILERS
1986 RETURNS

TABLE 1 : 1986 RETURNS	TAX RETURNS		FILING STATUS								TOTAL FAMILIES WITH CHILDREN (B+D)		FAMILIES WITH CHILD IN COLLEGE	
			(A) SINGLE NO DEPENDENTS		(B) SINGLE WITH CHILDREN		(C) MARRIED NO DEPENDENTS		(D) MARRIED WITH CHILDREN					
	N	PCT	N	PCT	N	PCT	N	PCT	N	PCT	N	PCT	N	PCT
INCOME IN 1986														
UNDER $10,000	1,019,443	30.1	791,861	48.0	91,822	29.4	106,575	16.7	29,185	3.7	121,007	11.0	4,447	2.8
$10-$15,000	360,052	10.6	225,313	13.7	61,565	19.7	44,568	7.0	28,606	3.6	90,171	8.2	4,911	3.1
$15-$20.000	322,732	9.5	190,652	11.6	50,895	16.3	42,347	6.7	38,838	4.9	89,733	8.[illegible]	6,645	4.2
$20-$25,000	270,986	8.0	143,357	8.7	35,286	11.3	42,595	6.7	49,748	6.3	85,034	7.7	7,827	4.9
$25-$30,000	230,670	6.8	100,053	6.1	24,297	7.8	44,621	7.0	61,699	7.8	85,996	7.8	8,403	5.3
$30-$35,000	197,601	5.8	65,511	4.0	15,475	5.0	45,623	7.2	70,992	9.0	86,467	7.9	9,305	5.8
$35-$40,000	170,665	5.0	41,889	2.5	9,994	3.2	44,851	7.0	73,931	9.4	83,925	7.6	10,211	6.4
$40-$50,000	267,143	7.9	42,512	2.6	10,410	3.3	80,810	12.7	133,411	16.9	143,821	13.1	22,081	13.9
$50-$75,000	329,006	9.7	30,446	1.8	7,888	2.5	111,105	17.5	179,567	22.8	187,455	17.0	43,975	27.6
$75-$100,000	102,508	3.0	8,203	0.5	2,148	0.7	34,627	5.4	57,530	7.3	59,678	5.4	18,166	11.4
OVER $100,000	117,399	3.5	10,834	0.7	2,763	0.9	38,969	6.1	64,833	8.2	67,596	6.1	23,092	14.5
TOTAL	3,388,205	100.0	1,650,631	100.0	312,543	100.0	636,691	100.0	788,340	100.0	1,100,883	100.0	159,063	100.0

OSA RESEARCH: LUTZ BERKNER

NEW JERSEY DEPARTMENT OF HIGHER EDUCATION

STATUS OF NEW JERSEY STATE INCOME TAX FILERS
1986 RETURNS

TABLE 1A : 1986 CUMULATIVE	TAX RETURNS		FILING STATUS								TOTAL FAMILIES WITH CHILDREN (B+D)		FAMILIES WITH CHILD IN COLLEGE	
			(A) SINGLE NO DEPENDENTS		(B) SINGLE WITH CHILDREN		(C) MARRIED NO DEPENDENTS		(D) MARRIED WITH CHILDREN					
	CUM	PCT	CUM	PCT	CUM	PCT	CUM	PCT	CUM	PCT	CUM	PCT	CUM	PCT
INCOME IN 1986														
UNDER $10,000	1,019,443	30.1	791,861	48.0	91,822	29.4	106,575	16.7	29,185	3.7	121,007	11.0	4,447	2.8
$10-$15,000	1,379,495	40.7	1,017,174	61.6	153,387	49.1	151,143	23.7	57,791	7.3	211,178	19.2	9,358	5.9
$15-$20.000	1,702,227	50.2	1,207,826	73.2	204,282	65.4	193,490	30.4	96,629	12.3	300,911	27.3	16,003	10.1
$20-$25,000	1,973,213	58.2	1,351,183	81.9	239,568	76.7	236,085	37.1	146,377	18.6	385,945	35.1	23,830	15.0
$25-$30,000	2,203,883	65.0	1,451,236	87.9	263,865	84.4	280,706	44.1	208,076	26.4	471,941	42.9	32,233	20.3
$30-$35,000	2,401,484	70.9	1,516,747	91.9	279,340	89.4	326,329	51.3	279,068	35.4	558,408	50.7	41,538	26.1
$35-$40,000	2,572,149	75.9	1,558,636	94.4	289,334	92.6	371,180	58.3	352,999	44.8	642,333	58.3	51,749	32.5
$40-$50,000	2,839,292	83.8	1,601,148	97.0	299,744	95.9	451,990	71.0	486,410	61.7	786,154	71.4	73,830	46.4
$50-$75,000	3,168,298	93.5	1,631,594	98.8	307,632	98.4	563,095	88.4	665,977	84.5	973,609	88.4	117,805	74.1
$75-$100,000	3,270,806	96.5	1,639,797	99.3	309,780	99.1	597,722	93.9	723,507	91.8	1,033,287	93.9	135,971	85.5
OVER $100,000	3,388,205	100.0	1,650,631	100.0	312,543	100.0	636,691	100.0	788,340	100.0	1,100,883	100.0	159,063	100.0

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OSA RESEARCH: LUTZ BERKNER

NEW JERSEY DEPARTMENT OF HIGHER EDUCATION

NEW JERSEY STATE INCOME TAX FILERS 1977, 1980, AND 1986
INCOME DISTRIBUTION OF NEW JERSEY FAMILIES WITH CHILDREN IN COLLEGE
COMPARED TO ALL NEW JERSEY FAMILIES WITH DEPENDENT CHILDREN

OSA RESEARCH:LUTZ BERKNER

TABLE 2 : FAMILY INCOME DISTRIBUTIONS	FAMILIES WITH CHILDREN						FAMILIES WITH CHILD IN COLLEGE					
	1977		1980		1986		1977		1980		1986	
	N	PCT	N	PCT	N	PCT	N	PCT	N	PCT	N	PCT
FAMILY INCOME CURRENT $												
UNDER $19,000	535,763	50.8	405,387	37.6	282,966	25.7	35,974	26.9	27,704	17.5	14,674	9.2
$19- $35,000	391,458	37.1	407,186	37.8	275,447	25.0	60,956	45.5	57,960	36.5	26,859	16.9
$35- $55,000	113,671	10.8	228,435	21.2	274,705	25.0	32,223	24.1	59,391	37.4	43,300	27.2
OVER $55,000	13,329	1.3	36,509	3.4	267,766	24.3	4,702	3.5	13,643	8.6	74,228	46.7
TOTAL	1,054,221	100.0	1,077,517	100.0	1,100,884	100.0	133,855	100.0	158,698	100.0	159,061	100.0
FAMILY INCOME CONSTANT 1986 $												
UNDER $19,000	238,802	22.7	276,329	25.6	282,966	25.7	12,480	9.3	16,127	10.2	14,674	9.2
$19- $35,000	336,904	32.0	327,863	30.4	275,447	25.0	26,890	20.1	32,613	20.6	26,859	16.9
$35- $55,000	300,075	28.5	291,978	27.1	274,705	25.0	44,088	32.9	55,646	35.1	43,300	27.2
OVER $55,000	178,440	16.9	181,347	16.8	267,766	24.3	50,397	37.7	54,312	34.2	74,228	46.7
TOTAL	1,054,221	100.0	1,077,517	100.0	1,100,884	100.0	133,855	100.0	158,698	100.0	159,061	100.0
FAMILY INCOME QUARTILES												
1 LOWEST	271,880	25.8	276,329	25.6	282,966	25.7	14,782	11.0	16,127	10.2	14,674	9.2
2 SECOND	263,883	25.0	271,902	25.2	275,447	25.0	21,192	15.8	26,030	16.4	26,859	16.9
3 THIRD	258,752	24.5	264,342	24.5	274,705	25.0	32,230	24.1	43,507	27.4	43,300	27.2
4 HIGHEST	259,706	24.6	264,944	24.6	267,766	24.3	65,651	49.0	73,034	46.0	74,228	46.7
TOTAL	1,054,221	100.0	1,077,517	100.0	1,100,884	100.0	133,855	100.0	158,698	100.0	159,061	100.0

NEW JERSEY DEPARTMENT OF HIGHER EDUCATION

NEW JERSEY STATE INCOME TAX FILERS 1977, 1980, AND 1986
INCOME DISTRIBUTION OF NEW JERSEY FAMILIES WITH CHILDREN IN COLLEGE
COMPARED TO ALL NEW JERSEY FAMILIES WITH DEPENDENT CHILDREN

OSA RESEARCH: LUTZ BERKNER

TABLE 3 : COLLEGE PARTICIPATION RATES & TEN YR CHANGE	1977			1980			1986			TEN YEAR CHANGE			
	FAMILIES WITH CHILDREN	FAMILIES WITH CHILD IN COLLEGE		FAMILIES WITH CHILDREN	FAMILIES WITH CHILD IN COLLEGE		FAMILIES WITH CHILDREN	FAMILIES WITH CHILD IN COLLEGE		FAMILIES WITH CHILDREN		FAMILIES WITH CHILD IN COLLEGE	
	N	N	RATE	N	N	RATE	N	N	RATE	CHANGE	%CHNG	CHANGE	%CHNG
FAMILY INCOME CURRENT $													
UNDER $19,000	535,763	35,974	6.7	405,387	27,704	6.8	282,966	14,674	5.2	-252,797	-47	-21,300	-59
$19- $35,000	391,458	60,956	15.6	407,186	57,960	14.2	275,447	26,859	9.8	-116,011	-30	-34,097	-56
$35- $55,000	113,671	32,223	28.3	228,435	59,391	26.0	274,705	43,300	15.8	161,034	142	11,077	34
OVER $55,000	13,329	4,702	35.3	36,509	13,643	37.4	267,766	74,228	27.7	254,437	1909	69,526	1479
TOTAL	1,054,221	133,855	12.7	1,077,517	158,698	14.7	1,100,884	159,061	14.4	46,663	4	25,206	19
FAMILY INCOME CONSTANT 1986 $													
UNDER $19,000	238,802	12,480	5.2	276,329	16,127	5.8	282,966	14,674	5.2	44,164	18	2,194	18
$19- $35,000	336,904	26,890	8.0	327,863	32,613	9.9	275,447	26,859	9.8	-61,457	-18	-31	-0
$35- $55,000	300,075	44,088	14.7	291,978	55,646	19.1	274,705	43,300	15.8	-25,370	-8	-788	-2
OVER $55,000	178,440	50,397	28.2	181,347	54,312	29.9	267,766	74,228	27.7	89,326	50	23,831	47
TOTAL	1,054,221	133,855	12.7	1,077,517	158,698	14.7	1,100,884	159,061	14.4	46,663	4	25,206	19
FAMILY INCOME QUARTILES													
1 LOWEST	271,880	14,782	5.4	276,329	16,127	5.8	282,966	14,674	5.2	11,086	4	-108	-1
2 SECOND	263,883	21,192	8.0	271,902	26,030	9.6	275,447	26,859	9.8	11,564	4	5,667	27
3 THIRD	258,752	32,230	12.5	264,342	43,507	16.5	274,705	43,300	15.8	15,953	6	11,070	34
4 HIGHEST	259,706	65,651	25.3	264,944	73,034	27.6	267,766	74,228	27.7	8,060	3	8,577	13
TOTAL	1,054,221	133,855	12.7	1,077,517	158,698	14.7	1,100,884	159,061	14.4	46,663	4	25,206	19

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THE NASFAA RAPID SURVEY NETWORK

A Presentation by Karl Knapp
at the Research Forum of the
1989 NASSGP/NCHELP Research Conference

June 7, 1989

The Rapid Survey Network (RSN) was originally established by NASFAA in 1983 to improve our ability to gather information on the potential effects of federal policy on financial aid offices. It fell into disuse in 1986 due to staff changes in the NASFAA office. NASFAA's Strategic Long Range Plan of 1987 called for the reestablishment of the RSN. Once reestablished, the RSN will be a pre-selected stratified random sample of NASFAA member institutions who will agree to quickly answer periodic written surveys regarding proposed legislation, regulations, and other developments in the field of student financial assistance. The RSN will provide NASFAA with a means of swiftly ascertaining the opinions of aid administrators at various types of institutions, and the effects of policy on their student populations. The sample will only be valid at the institutional level, however, and will not provide a valid database of students.

Once operational, the RSN will be administered by the NASFAA Research Committee. The Committee and its NASFAA staff liaisons will determine the content of the surveys, and NASFAA will have sole right of access to the survey results. Priority for surveys will go to the NASFAA Governmental Affairs division. Suggestions for survey content will be accepted from individuals, NASFAA committees and other organizations, but surveys will be limited in number and length. Surveys will ask questions about administrator opinion on issues such as possible need analysis changes or loan default initiatives, and will ask for information about the effects of those changes on the institution's aid population. Survey results will be made public or shared at the discretion of the NASFAA staff.

The RSN sample will reflect the composition of the NASFAA membership. To stratify the sample it was required that institutional characteristics that affect the perception of policy issues be determined. The NASFAA membership database, from which the sample would be drawn, contains some information on institutional characteristics. Based upon previous surveys of the NASFAA membership it was decided that the variables that could affect positions towards a given financial aid policy and could be identified from the NASFAA membership database were the institutional size, type, and control. While institutional geographic location was available form the database, it was not considered to have a significant enough impact on policy opinions to warrant the increase in the sample size that would be required to achieve adequate stratification. Other institutional variables that could contribute to opinion differences such as the size and composition of the student aid population, types of programs administered or the aid office staff size were not available from the membership database.

The membership database lists institutions as belonging to one of the following categories; 4–year public, 4–year private, 2–year public, 2–year private, vocational/technical, proprietary or other. Institutions choose the category to which they belong. These categories were used for the stratification of the RSN sample. Within three of these categories, further divisions on the basis of size were necessary. Wide ranges of enrollments at four year public, four year private, and two year public institutions required that these institutional types were each divided into two categories each by size.

The categories shown in Table 1 are those created to stratify the RSN sample. Each category must be made up of a minimum of 30 institutions to insure that statements can be made about response differences between categories. It was decided that the minimum number of institutions be raised to 40 to insure that results would be valid even if several institutions were unable to respond to a given survey. Assuming that many institutions will decline the offer to participate, 80 institutions in each category will be invited to join the RSN.

Table 1
RSN Institutional Categories

Four Year Public FTE < 5000
Four Year Public FTE 5000+
Four Year Private FTE < 1500
Four Year Private FTE 1500+
Two Year Public FTE < 1000
Two Year Public FTE 1000+
Two Year Private
Vocational/Technical
Proprietary
Graduate/Professional
Other

The 80 institutions in each category that will be invited to join the RSN were selected at random by means of a computer program. Invitations to these institutions have not yet been sent out because NASFAA is in the process of negotiating an agreement whereby a sponsor

GUARANTEED STUDENT LOAN INDEBTEDNESS: ITS INFLUENCE ON UNDERGRADUATE STUDENT DECISION-MAKING AT VIRGINIA COMMONWEALTH UNIVERSITY

A Paper presented by

Alice E. Presson, Ph. D.

University of Virginia

June 7, 1989

In recent years, much of student financial aid literature has focused on the Guaranteed Student Loan Program. Many researchers and policy-makers have expressed concern over an increasing dependency of students on educational loans. Frank Newman, Theodore Marchese, Janet Hansen, and others have raised questions about the influence of borrowing on traditional values of students, on the choice of careers and major areas of study, and on the consumption patterns of those borrowers. While various studies have looked at the influence of educational loan repayment upon the borrower, it is not clear to what extent college students are prompted by their growing indebtedness to make certain choices and decisions about the future while they are still in college. It is furthermore unclear if the choices and decisions that undergraduate student borrowers may make are statistically related to level of indebtedness. That is, is there some relationship between the size of one's debt and the tendency to come to certain decisions while still in college? It was the purpose of this study to identify and to describe the influence of GSL indebtedness on decisions that students make while still in college.

Methodology

In an effort to identify the areas of student decision-making that might be influenced by GSL indebtedness and to describe those areas and any relationship of each to the varying levels of indebtedness, a survey questionnaire was mailed to all GSL holders in their fourth year of undergraduate study at Virginia Commonwealth University (VCU) during the Spring Semester of 1988. A total of 920 students were sent questionnaires, with

395 students returning completed instruments by the end of the semester, giving a response rate of 43 percent. The respondents were demographically representative of the population of 920 fourth year GSL borrowers. Since these students were still in school and representative of VCU's GSL borrowers, respondents are presumed to include the expected proportion of potential loan defaulters. Twenty-two percent of the respondents had GSL's of $4,000 or less; 46 percent had GSL's between $4,001 and $8,000; and 32 percent were in debt by more than $8,000 worth of GSL's.

The major part of the instrument addressed three general areas of decision-making possibly influenced by the GSL. Consisting of twenty-seven items, this part addressed decision-making activities in three areas: academic progress, life-style while in college, and activities after graduation. Since the study was designed to examine the relationship between students' responses to each item and the independent variable of level of GSL debt, the chi-square procedure was used in cross-tabulating the variables. These items were constructed with Likert-type response stems ranging progressively from the "GSL was no factor" to the "GSL was the largest factor." Frequencies were determined for all items for the 395 respondents and for sub-groups according to gender, race, age, marital status, dependency status, major, and level of GSL debt.

Findings

Students' responses on twelve items were found to be statistically related to their level of GSL debt. That is to say, at the higher levels of debt, students indicated with greater frequency that GSL indebtedness had been a large or the largest factor in those twelve particular decisions. Those decisions were as follows. (See Table 1 for a statistical summary of decision-making areas.)

1. To attend college
2. To attend the college of his/her choice
3. To be a full-time student in order to finish college as soon as possible
4. To work during the summer
5. To be interested in a well-paying job
6. To be interested in a full-time job
7. To postpone doing some things that the student had wanted to do after graduating from college
8. Not to do some things that the student had wanted to do after graduating from college
9. To postpone going to graduate school
10. To search for a graduate school within a low price range
11. To enroll in graduate school
12. Not to attend graduate school at all

Decision-making areas that were not characterized by a differences in responses according to debt level were the following.

1. Choice of major
2. To take more classes than the student would have if he/she had not had a loan
3. To be a part-time student in order to defer paying back the loan(s)

TABLE 1

AREAS OF DECISION-MAKING INFLUENCED BY HAVING A GSL FOUND TO BE STATISTICALLY RELATED TO LEVEL OF GSL DEBT

Perception of GSL influence on:	n	No Factor	Small or Average Factor	Large or Largest Factor	alpha Level	X^2 Value
Attending college	391	16	17	67	.001	22.594
Interest in a well-paying job	368	19	28	53	.001	21.828
Interest in a full-time job	368	22	25	53	.001	22.005
Being a full-time student in order to finish college as soon as possible	372	23	22	55	.05	10.361
Postponement of doing some things that the student had wanted to do after graduating from college	328	34	26	41	.001	18.665
Not doing some things that the student had wanted to do after graduating from college	230	34	28	39	.001	21.577
Working during the summer	347	38	27	34	.005	15.349
Postponement of going to graduate school	284	42	22	36	.001	22.030

(Cont. Table 1.)

Searching for a graduate school within a low price range	214	44	25	31	.005	15.165
Enrolling in graduate school	219	46	21	33	.001	22.301
Attending the college of one's choice	363	51	23	26	.02	13.434
Not attending graduate school	201	58	19	23	.001	20.105

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*Percentages are rounded to the nearest whole percent.

4. To drop out of college for a while
5. To ask for financial help for college from parents, other relatives, or friends
6. To alter spending patterns, either spending more or less than the student would have spent without the loan
7. Not to buy luxury items
8. To spend as much money as desired
9. To seek a part-time job while in college
10. To seek a full-time job while in college
11. To get a job in college in order to make ends meet
12. To get a job in college in order to maintain a certain standard of living
13. To make decisions about marriage
14. To look for a job, rather than a loan, in order to pay for graduate school

Since there were statistical differences between responses of many sub-groups at the three levels of GSL debt, profiles of various sub-groups were developed to describe the particular areas of decision-making for each sub-group. See Table 2 for a summary of items found to be statistically related to debt level of respondents.

Responses of black students were related to debt level for few items. Responses of black students, however, were related to level of GSL debt on the decision to enroll initially in college.

Female students, in considerably higher proportions than males, indicated that their indebtedness had influenced their interest in a full-time and well-paying job after college.

TABLE 2

A COMPARISON BETWEEN SELECTED DEMOGRAPHIC SUBGROUPS REGARDING THE PERCENTAGES IN WHICH RESPONDENTS REGARDED THE GSL "A LARGE" OR "THE LARGEST FACTOR" IN VARIOUS DECISION-MAKING AREAS[1]

Decision-making area	Black	White	Female	male	Indep.	Single	T.A.[2]	N.T.A.[3]
Interest in a full-time job after graduating	-	52(2)	57(3)	44(2)	53(2)	52(4)	56(1)	50(3)
Interest in a well-paying job after graduating	-	51(3)	58(2)	41(3)	52(3)	53(3)	55(2)	51(2)
Attending college	56(1)	69(1)	70(1)	-	69(1)	67(1)	-	68(1)
Postponing doing some things	-	43(4)	43(5)	34(4)	39(5)	41(5)	-	34(4)
Not doing some things	-	40(5)	41(6)	-	40(4)	38(6)	-	33(5)
Postponing graduate school	-	37(6)	40(8)	-	36(6)	36(7)	43(3)	-
Enrolling in graduate school	-	31(8)	55(4)	-	31(7)	32(9)	-	29(6)
Working during the summer	-	35(7)	37(9)	-	-	35(8)	38(4)	-
Looking for a graduate school within a low price range	-	-	34(10)	-	27(8)	32(10)	-	24(7)
Not attending graduate school	-	29(9)	40(7)	-	-	24(12)	-	-
Choice of college	-	-	-	23(5)	-	28(11)	30(5)	-
Being a full-time student	-	-	-	53(1)	-	53(2)	-	-
Not buying luxury items	24(2)	-	-	-	-	-	-	-
Spending as much as one wishes	15(3)	-	-	-	-	-	-	-

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[1] Numbers within parentheses refer to a ranking of the areas of decision-making according to the proportion of students in each sub-group who considered the GSL "a large" or "the largest factor." Percentages refer to the proportion of cross-tabulated responses which indicated the GSL as "a large" or "the largest factor" in each decision.

[2] Traditional college age students.

[3] Non-traditional college age students.

Likewise, they reported that having loans had influenced their decisions about graduate school, including the decision to look for a graduate school within a low price range. Responses of male students, unlike those of females, in the above areas were not related to level of debt.

The findings of this study suggest that students who have GSL's at VCU have been influenced by their loan debt to address certain dilemmas and to make conscious decisions regarding activities while they are in college and as they project to their future after graduation. This suggests that those particular decision-making areas related to GSL debt should be investigated further, perhaps on a state-wide level or on a national level, to determine to what extent they apply to large groups of educational borrowers, regardless of institutional type. Furthermore, the findings suggest that researchers look more closely at the impact of borrowing on female students as they make financial plans to complete school, as many of them face issues related to graduate study, and as they focus on post-college employment.

Also important are the implications that these findings have for financial aid officers as they devise aid packages for incoming students. While it seems clear that the GSL was viewed as a large factor influencing students to enroll in college, the most successful balance between loans and other forms of financial aid for each individual student is not always apparent. By designing representative profiles of students at the institutional level, financial aid personnel might be more equipped with assisting a large volume of students. Such profiles should be maintained current, however, to reflect accurately the needs and concerns of students undertaking several or many years of loan repayments. Attention to the influence of borrowing upon college students could provide insight for the development of techniques which might help student borrowers and loan officers better address problems leading to default.

DEVELOPMENT OF THE PELL GRANT PRE-ESTABLISHED CRITERIA

Pedro J. Saavedra
Macro Systems
8630 Fenton St.
Silver Spring, MD 20910

A recent book addressed to the general public on Student Financial Assistance referred to Pell Grants pre-established criteria used to determine which applicants should be submitted to verification as "bureaucratese for something smells fishy". Even to Financial Aid Administrators, pre-established criteria remain a mystery imposed from above. The purpose of this paper is to remove some of the mystery and explain the procedure through which the criteria were arrived at.

The Pell Grant System has for some time now used pre-established criteria in order to identify applicants who would be required to present evidence of the accuracy of the information they provided. This system has developed over the years, from a set of criteria derived through a logical examination of the information provided to purely empirically derived error-prone models to the current system where criteria are derived through various means and an empirical approach selects the best ones to arrive at the percentage required for selection.

The purpose of this paper is to present a description of the Pell Grant targeted selection system, from a methodological perspective. This presentation will not discuss the specific criteria, but rather address the rationale used to derive the criteria and the general findings in terms of their effectiveness.

The targeted selection criteria are derived using a sample database which is a subset of the Pell Applicant File. This sample database is drawn in the spring of the second year of the particular cycle. It includes 150,000 applicants, 50,000 each in the following categories:

- Applicants who have ever been eligible and were randomly selected for verification and who applied during the first year of the cycle.

- Applicants who have ever been eligible and were randomly selected for exclusion from verification and who applied during the first year of the cycle.

- All other applicants.

The database is merged with the Pell Payment File so that for each applicant we know the Student Aid Index (SAI) on a given transaction (and can thus calculate average expected award for that SAI) and can also calculate the average expected award at payment (which will be zero if the student does not appear in the payment file). Originally a criterion was deemed to be effective if there was a large difference between the award at selection and the award at payment. Subsequent analysis discovered systematic tendencies to self-correction among certain groups. At that point the decision was made to randomly make a group immune so as to see who corrects spontaneously and who does not.

Today a criterion is deemed effective to the degree to which the difference between average expected award at selection and average expected award at payment is greater than the corresponding difference for students who meet it and are not selected.

A pool of criteria is first examined, and the most effective criterion is chosen. Then a second criterion is selected among those who do not meet the first. The process continues until the desired percentage of eligible applicants is selected. Several additional criteria are always identified, up to the point where random selection would be superior to any available criterion. Those criteria which can be easily extended to include ineligibles are thus extended. In the fall the analysis is updated to insure that the proper percentage of applicants will be selected.

The remainder of this paper will be presented in question and answer format, as a means of clarifying the procedure.

Q: What is the targeted verification system?

A: When a Pell Grant applicant submits his application or a correction to a previously submitted application to the Pell Grant processing system the targeted verification system edits the application and looks for any of a number of criteria. If any one of these criteria is met by the application, the applicant is selected for verification, and is required to present evidence of the financial information he has reported. The applicant may submit a correction to the processing system before or after presenting the evidence to the Financial Aid Administrator, who will require further corrections if necessary.

Q: What is the purpose of this exercise?

A: It has been shown that many students misreport (for the most part unintentionally) their income, assets, family size, dependency status and other information necessary to calculate their Student Aid Index on which the Pell Grant award is based. One way of reducing the amount of misreporting (and thus fulfilling and intent of Congress that it be precisely the needy students who receive the awards) would be to require every student to present evidence of the information that they report. This would, however, repesent a burden to the institutions. In order to reduce this burden an analysis is carried out to identify characteristics of the students who are most likely to misreport. Thus a series of criteria are identified and students meeting any one of these are selected for verification. An additional number are selected at random to permit this analysis to take place.

Q: What do you mean "Students who are likely to misreport?" What sort of criteria do you use and how do they work?

A: There are different reasons why criteria probably work. While we cannot divulge the criteria that we use, we can present examples which will give you the general idea.

First of all there are some criteria that reflect reporting patterns that do not appear to be likely combinations. For example, if an applicant reported taxes in excess of his income, this would be likely to trigger a criterion. This does not mean we are determining that he has misreported, merely that we want him to present evidence of his income and taxes.

Other criteria may represent evidence of carelessness in filling up the application. Again, such carelessness may not have resulted in misreporting on the critical variables which make up the Student Aid Index, but a larger proportion of students who have shown such carelessness tend to misreport than of those who don't.

A third class of criteria probably work because they represent students in situations where computing or estimating their income may be more difficult. Such might be the case with students with many different kinds of income or meeting certain complex conditions.

Finally there are criteria which may represent a combination of the above, or which may work simply because they are associated with another characteristic. We do not always know why a criterion works, but we always determine that it works before implementing it.

Q: What do you mean by "works?" How do you determine this?

A: By "works" we mean that the Pell Grant a student would have received had he not been selected for verification would have been much different (greater or smaller) than the Pell Grant he would have received had he been selected.

In order to determine which among possible criteria works best we select a certain number of applicants at random. We likewise randomly make another set of applicants immune from selection. For each criterion we compare the award received by selected applicants with the award received by applicants not selected. A large discrepancy in awards (or in proportion of eligible applicants paid) leads to the determination that we have a good criterion.

Q: How do you get your criteria in the first place?

A: There are several methods through which we select our initial pool of criteria. Some are suggested by staff involved in the Pell Grant program or by analysts which bring up certain possible misinterpretations of instructions or errors which one might make. Others are identified through a variety of statistical procedures which yield equations predicting likelihood of error. In some cases we simply experiment with various combinations just to see what happens. There are even some which have been in use several years and work well, but for which the rationale which prompted their original use is not remembered or seems no longer applicable (in spite of which the criterion remains effective).

The important thing is that after we obtain a large pool of possible criteria we start selecting then one by one. We start with the most effective and proceed selecting at each step the most effective criterion among applicants not already selected by a previous one. We continue until we run out of criteria or determine that any additional ones would not be cost-effective.

Q: We find that among our recipients most would have received a lower award or no award at all before selection. Doesn't this cost the government money?

A: The purpose of verification is to fulfill the intent of Congress, i.e. minimize misallocated dollars in either direction. However, we would like to point out that by looking at recipients only you are likely to get precisely the effect you found. If you were to focus on applicants who were initially eligible, you would find many who became ineligible and received no award (in excess of the proportion of those with similar characteristics who were never selected). By focusing on recipients you get an overrepresentation of applicants increasing their awards, and an underrepresentation of applicants decreasing them. The processing system keeps records of all these applicants and is able to analyze them.

Q: So you base your criteria on what happened the previous year?

A: Actually we take data for two consecutive years into account. We do most of our work with application and payment data that is from two academic years prior to the one for which we implement the criteria. We then go to the year prior to the target year and verify that correction patterns have not changed.

A: What if things change from one year to the next?

A: It is true that when the system or the economy change considerably from one year to the next the targeted verification criteria will not work as well. However, we do monitor the criteria as the year progresses and if a criterion is not working or if it is selecting too many applicants we modify it or eliminate it.

The author wishes to thank the Student Verification Branch, National Computer Systems and Macro Systems for granting permission to present this paper. However, the opinions presented in this paper are strictly the author's and not necessarily those of the Student Verification Branch, National Computer Systems or Macro Systems.

Corporate Support for Scholarships:

A Tale of Two Cities

Joseph M. Cronin
President
Massachusetts Higher Education
Assistance Corporation

Chapter in upcoming ACE/MacMillan
volume on new roles in
financing higher education

Selected highlights of chapter presented at sixth Annual Meeting of NASSGP/NCHELP Research Network by Marilyn Pedalino, Director of Planning and Research, MHEAC.

How best can corporations and foundations help low-income students from the inner city plan for and pay for college? What are the advantages and shortcomings of various models of financial assistance to students? What can be learned from twenty years of experimentation and how can business and governmental executives evaluate the "new ideas" in urban scholarship and counseling programs?

Business leaders in Cleveland and Boston during the 1980's raised millions of dollars to support inner-city student scholarships. Their private sector initiatives, although less personalized than Eugene Lang's "I Have A Dream" Foundation, cast a much broader net for needy high school students and leverage a much larger sum of money for more students over a longer span of time.

In 1967, community leaders in Cleveland launched successfully the Cleveland Scholarship Programs, which provide supplementary scholarship assistance (so-called "last dollar" scholarships) and financial aid counseling to more than 1,000 Cleveland area students each year. A new plan, the Scholarship-in-Escrow program (SIE), was begun in 1987. A task force of the Greater Cleveland Roundtable and Ameritrust, a Cleveland bank, worked out details of the SIE plan, which sets aside sums of money for students earning good marks in grades 7-12.

Boston in 1984 built into the privately sponsored Plan for Excellence in the Public Schools a program called ACCESS for Boston public school students based on the Cleveland "last dollar" scholarship and counseling model. Corporations and Boston area foundations raised an endowment fund of $5.5 million with interest earnings paying the costs of ACCESS counselors and scholarships. By 1988 over 1,000 high school seniors annually received advice on attending college and obtaining financial aid. ACCESS awards averaged over $500.

The Cleveland and Boston scholarship programs are important models because:

1. All students, not just those from one grade of a single elementary school, are eligible for assistance;

2. Expert financial aid counselors provide guidance to the students and their parents;

3. The aid is available year after year, not just to one class upon graduation in a certain year; and

4. Existing state, federal aid and campus sources are tapped to the fullest.

Thousands of college-bound students in each of these cities benefit. No one gets a scholarship unless he/she can demonstrate actual need, a cornerstone of most financial aid programs. Other cities and several states have launched similar initiatives.

Cleveland Pioneers

Cleveland hired a team of financial aid advisors, a fundraiser and an administrator for the Cleveland Scholarship Programs (CSP). The city recognized the inadequacy of education opportunity programs and built its capacity to inform youngsters that college was attainable and how to apply for aid.

During the 1970's the Cleveland programs operated on two important assumptions:

1. Students not only need money but also detailed advice on how to apply for college, when and how to qualify for financial aid, and encouragement to stay in school.

2. Private scholarship funds are required to fill any remaining need or cost of education gaps after all other public grants, work study money and loans have been authorized by campus and state aid offices.

How successful have the Cleveland Scholarship Programs been over a twenty-year period?

1. At the end of 1987 more than 50,000 students had been assisted in their efforts to pursue higher education.

2. The percentage of Cleveland public school students pursuing college or vocational training rose from 12 percent to 52 percent.

3. Cleveland leaders raised almost $6 million over 20 years in college scholarships for the further education of disadvantaged students.

4. CSP provided more than $4 million of specialized counseling services by twenty-one part-time financial aid advisers and in payment of college test fees, application fees, acceptance fees and housing fees if they could not be deferred or waived.

5. The above efforts leveraged another $70 million in state, federal and institutional sources for Cleveland students over the two decades.

President Reagan's Task Force on Private Sector Initiatives saluted CSP as a model program and the U.S. Department of Education invited twenty-three cities in 1985 to a Washington conference to discuss similar strategies for other cities. The CSP model was adopted by or influenced programs in Boston, Baltimore, New York, Miami, Columbus and Dayton, Ohio; Richmond, Norfolk and Alexandria, Virginia and elsewhere.

CSP also serves suburban and private Ohio schools near Cleveland provided they pay a fee for the support of additional counselors.

Boston Initiatives

Boston Public Schools in 1981 sought help from universities and businesses, many already cooperating with individual schools on a partnership basis. A Boston Compact, announced by the Boston Private Industry Council (PIC), focused on cooperative incentives between the city school system and the corporate community: as long as Boston schools raised attendance rates and test scores, and lowered dropout rates, summer jobs were guaranteed as well as consideration for full-time jobs after graduation. Fourteen working groups were established, including a task force to enlist volunteers to counsel youngsters about college financial aid. Four hundred companies signed the Compact.

Twenty-five colleges and universities offered to increase the number of Boston public school graduates enrolling in postsecondary education by 25 percent over a five-year period in exchange for stronger academic preparation by the schools.

In the early 1980's Boston's climate of business support for education moved from good to excellent. The Bank of Boston on the occasion of a 200th anniversary created an urban education endowment called the Boston Plan for Excellence in the Public Schools. A gift of $1.5 million in stocks was designated for school improvement grants to fund proposals submitted by teachers and principals. A major life insurance and financial services company, The New England celebrated 150 years of success with a series of gifts to Boston, the largest of which was a $1 million donation to endow the ACCESS program.

ACCESS is an acronym for the Action Center for Educational Services and Scholarships. The purpose of ACCESS was to assure that any academically qualified student in the Boston public schools has a chance to go to college. From the start the ACCESS effort emphasized financial aid counseling as an ingredient just as important as the last dollar scholarships. Although volunteers were helpful and regular high school counselors wanted to provide more assistance, the initial ACCESS counselors were offered pay equivalent to substitute teacher per diem salaries in the Boston schools.

ACCESS sponsors knew it would not be enough to help college freshmen for one year or to fund only one class of high school seniors. Funds were needed to renew the assistance in subsequent years. The New England CEO, Ted Phillips, decided to raise five million dollars for ACCESS. The Boston Foundation authorized a challenge grant of $1 million on a two to one match. Pledges poured in. During a vigorous campaign, the Private Industry Council agreed to a novel amendment to The Boston Compact -- that all Boston public high school graduates who completed post-secondary programs would be given the opportunity to interview for professional and management positions in those same companies which had agreed to hire summer employees and high school graduates.

The public announcement of this commitment to provide access to higher education and professional careers to inner-city public school students brought immediate acclaim from the Boston press, The New York Times, Wall Street Journal, USA Today and the major television networks. Meanwhile, Boston University, Boston College, Northeastern University and the University of Massachusetts at Boston sponsored additional scholarships for city youth worth several million dollars each year.

So warm was the reception that a non-profit organization, the Massachusetts Higher Education Assistance Corporation (MHEAC) contributed one million dollars to endow the counseling and information component. The unanimous vote of the MHEAC board brought the total contributions and pledges to $5.5 million.

Last dollar scholarships were increasing, but was information about sources of aid for college sufficient? Leaders of MHEAC and ACCESS felt much more needed to be done and developed additional strategies to inform students and parents about post-secondary education:

1. City children know very little about colleges, and their parents (or parent) often lack both information and transportation to colleges ten miles from the city. The Boston schools supported student trips to nearby suburban colleges willing to recruit more urban students. Later, a private corporation, New England Education Loan Marketing Corporation, provided a small grant for these trips.

2. The fact that crucial decisions about courses must be made early was emphasized to students not accustomed to thinking early about the post-secondary option. During 1988 The Education Resources Institute (TERI) agreed to finance an early awareness booklet prepared in English and Spanish by the Association of Independent Colleges and Universities of Massachusetts (AICUM). Within weeks the first 50,000 copies were spoken for and a second edition of 25,000 ordered. Parents are thirsty for ideas on what to do in the middle grades or earlier to assist their children in obtaining higher education.

3. Many urban students needed to practice in preparing for SAT and ACT tests. The regional office of The College Board helped MHEAC schedule practice examinations by providing previous copies of entrance examinations and advice on how to score and report any patterns of academic weakness to students.

4. Once admitted to college, inner city students continue to need advice on how to stay in school and cope with numerous challenges, only one of which is money. ACCESS has developed a comprehensive support system for students while in college.

The College Board Commission on Pre-College Guidance and Counseling (Keeping the Options Open, CEEB, New York, 1986) recommends early awareness programs of guidance and urged stronger collaboration among schools, agencies, colleges, businesses and other community resources for these purposes. The College Board concluded, as had Cleveland and Boston teachers, that high schools have "too few counselors trying to do too much for too many."

Cleveland Takes the Compact Further

Late in 1986 the new Cleveland Public School Superintendent of Schools, Alfred D. Tutela, announced an intention to increase the holding power of the Cleveland schools whose dropout rate was around 50 percent. He also asked for help on a School-to-Work Youth Employment Transition program including summer jobs and priority hiring for Cleveland public school graduates. A non-profit organization called Youth Opportunities Unlimited (YOU) conducted the job readiness training and arranged summer jobs for 2,000 students and arranged community service projects for another 600 students. This variation on the Boston Compact was called the Cleveland Initiative for Education.

The other component was a new incentive plan to reward pupils who studied hard for good grades in academic subjects in middle school and senior high. Called the Scholarship-in-Escrow (SIE) program, students would earn $40 for each A grade, $20 for each B, $10 for each C in a core academic subject with a $10 bonus for each honors class. Cleveland students qualified for $1.8 million in credits during the last two quarters of the 1987-1988 school year. A task force of the Greater Cleveland Roundtable worked out the SIE program details and Ameritrust, a Cleveland bank, devised a system of accounts for each student.

No one in Cleveland feels that success will come easily or automatically. In 1987 almost 40 percent of the students in grades 7 through 12 earned only D's and F's in the core academic subjects. In 1988 any student with straight A's from the seventh grade on could build up as much as $4,800 in college credit while a C student could earn $1,000, assuming 30 courses and four quarters of grades in each course. The bank will issue a statement to each student periodically showing how much money has been earned. A student will have up to eight years to spend the money on continued education. If the student leaves the system, the money is lost to that student.

The Cleveland Foundation committed $3 million to stimulate a drive to raise an endowment for S.I.E. from corporations and other foundations. Two major Cleveland companies, TRW Inc. and the Eaton Corporation, in 1988 pledged $2 million to the Payment for Grades program.

Superintendent Tutela suggests that "These programs will give kids a reason to dream. College can become a real possibility. A job becomes a real possibility. There is a reason to stay in school and graduate."

Higher education institutions also agreed to support the Cleveland Initiative. Oberlin College has offered to put up matching scholarships to any Cleveland student who earns such a scholarship. So will Case Western Reserve University.

Other Cities, Other States

A dozen other urban communities and several states have also decided to raise funds to encourage urban youth prepare for and finance a college education.

Baltimore has begun a five-year, $25 million fund drive creating the College Bound Foundation with a permanent endowment aimed at helping economically disadvantaged graduates of the city public schools, although other students can also qualify. The format includes:

1. underwriting costs of preparing for college, including college entrance exams, application fees and SAT exam preparation course;
2. full and partial grants, including "last dollar" financing;
3. help in applying for college admissions and financial aid;
4. paying college acceptance and dorm reservation fees; and
5. providing continuing mentors, including paid student tutors and peer counselors at college.

The Greater Baltimore Committee organized the College Bound Foundation with a board consisting of the mayor, the school superintendent, the University of Maryland-Baltimore County president, a foundation president and six corporate executives. As in Cleveland and Boston, one goal is to prevent dropouts, and a major tactic is the hiring of special college counselors. Starting with sixth graders, businesses (as many as 150) will provide tours to introduce pupils to the business world and ultimately provide summer internships and part-time after school jobs.

Meanwhile, the State of Florida received funds from the McKnight Foundation (established by the leader of 3M) to finance Centers of Excellence to develop academic talent, and support parent training and encourage personal enrichment. There are 35 Centers of Excellence in Florida providing assistance to Black students through a full program of services and support. During 1986, McKnight provided $100,000 and the Florida State Legislature, $150,000.

The explicit McKnight-Florida strategy is to create Black community support for minority youth. The tactics include:

1. heavy reliance on Black churches, 75 of them, to instill a sense of heritage, cultural pride and moral purpose, and provide homework centers;
2. creation of McKnight Achievement Societies in each county or community with distinctive jackets and a logo to reward honor graduates earning A's and B's and/or achieving music/artistic work of distinction;
3. enlistment of adult sponsors/mentors who link the students to successful adult professionals in the community;
4. sponsorship of a statewide "brain bowl," an academic equivalent to highly-visible athletic recognition.

The National Urban League has endorsed this program and Florida has pledged to help support creation of a $25 million endowment fund. The McKnight program, with its reliance on churches, mentors, academic competition and young Black Achiever clubs builds a support structure for Black, Cuban and Haitian youth which could help many thousands of students each year.

Other Corporate, Community and Philanthropic Models

The Citizen's Scholarship Foundation of America (CSFA) manages more than 220 scholarship programs for 350 local community chapters and for more than 100 corporations and smaller foundations. CSFA chapters encourage recipients to repay their scholarships later in life, in effect an "honor loan" or moral obligation to help the next generation of students.

Now headquartered in St. Peter, Minnesota, CSFA has grown from $2 million in awards in 1984 to almost $10 million in 1988. Program administration, volunteers and fundraising expenses amount to about 17 percent, much of which in recent years represents management fees to help corporations run an employee or community program. CSFA activity is especially strong in New England, New York, Minnesota and Indiana, but CSFA has hired program development officers in California and New Jersey to expand services to other regions.

Beyond the Lang Model

Eugene Lang's example of assistance to one New York City 6th grade class, and "I Have A Dream" foundation, has captured the popular imagination and won supporters in other cities. Just a few examples include:

1. Philadelphia's initiative by George Weiss, a stockbroker, to help 112 students graduating from the Belmont Elementary School finance a college education. He has challenged his business colleagues to provide more counselors, tutors and endowment for 35,000 children in West Philadelphia.

2. Baltimore's Robert Bonwell, a retired businessman, who offered $5,000 in tuition to attend any state approved college or university in Maryland to 54 students at a Baltimore senior high school. Mr. Bonwell also hired five minority mentors to advise them.

3. Virginia multimillionaire George Kettle's offer to pay college costs for a sixth grade class at the Winston Educational Center in Washington, D.C. if they finish high school.

4. Fannie Mae, the national mortgage association, will place $500 in a special savings account for Woodson High School students who earn all A's or B's -- up to a $4,000 total.

By 1987 Lang grant college programs had spread to 15 cities. During 1988 Merrill Lynch in cooperation with the Urban League contributed $500,000 to be used in ten cities for 25 first grade students. Each student would have $2,000 invested so as to yield $25,000 twelve years later. However, these programs resemble the "wheel of fortune" and help only one school or one grade in a school with no help to thousands of other equally needy youth.

Evaluating These Programs

The original Cleveland programs have been evaluated on three occasions:

1) By the Markus Foundation which found that one reason students did not claim student aid 1954-1967 was that they didn't know how to fill out the forms and didn't believe they could qualify for assistance;

2) By the CSP in the 1970's when an outside expert showed them how to leverage other sources of student aid more effectively;

3) By sociology professor Eugene Uyecki of Case Western Reserve University in 1988 who surveyed a random sample of 633 student assisted by CSP. The Cleveland Foundation and Picway Stores paid for the study of recipients 1967-83.

The 1988 evaluation asked questions about completion of college, subsequent employment and degrees, and attitudes towards the services reviewed. The finding revealed that:

- more than 9 out of 10 respondents attended a 4 year college and 77 percent finished college (80 percent of the 4 year college students, 64 percent of those attending 2 year colleges)
- 85 percent attended Ohio colleges, 62 percent of them at public colleges
- more than half of the students were the first persons in their family to attend college
- 56 percent were black, 39 percent white and 4 percent other minorities
- the more aid received from CSP, the more likely students were to graduate from a 4 year college
- the graduation rate was 85 percent for white respondents and 75 percent for black respondents, substantially higher than the 50 percent reported in other national studies.
- while 21 percent studied business, 28 percent studied the humanities or social sciences, 15 percent education, and 12 percent science and engineering
- 40 percent work in private industry, 23 percent in government (one is an Ohio State Senator), 15 percent for non-profits and 5 percent are self-employed

Of the CSP services received:

- 82 percent said CSP assistance was important in going to college and 63 percent in finishing college
- 65 percent reported assistance with forms
- 49 received counseling support and 41 percent information about specific colleges and universities
- 19 percent received assistance in paying application fees and housing deposits

CSP aid was augmented by other sources:

76 percent from earnings from students work

62 percent federal grants

60 percent campus scholarships

55 state of Ohio grants

45 percent bank or college loans

43 percent family assistance

Of those who received aid 54 percent of the students came from families with an average annual income of under $15,000. Those from families with an income of more than $25,000 typically were from large families. The evaluation report included biographical case studies. One Hispanic attorney now in his early 40's serves on the CSP board. Another former recipient is a financial administrator for two foundations. Others include a medical doctor, an electrical engineer, a research chemist, a special education teacher, and a neighborhood housing specialist.

The collection of longitudinal data is important in evaluating all corporate and philanthropic efforts to assist education, especially in the cities. This Case Western study had a response rate of 38 percent, two-thirds of them women, which reflects in part the difficulty in keeping track of thousands of past recipients, many of whom became more mobile because of their education. Especially in the early years it was more important to get new groups into college than to track the progress of alumni. However, some funds must be raised or set aside for program evaluation and for maintaining a file on recipients after they leave or graduate.

Annually, as well as at the end of five years the organizers of The Boston Compact completed program evaluations. Indicators of success included a higher student attendance rate and some improvements in student achievement scores in four out of five years. However, the dropout rate showed signs of worsening in a decade of full employment, rising teenage pregnancy rates, and increased drug traffic in the city. The corporate community for its part met or exceeded all of the employment goals as promised at the outset of the Compact.

The new Cleveland Scholarship In Escrow program presents a different evaluation challenge. After three years the principals and teachers will know whether the extra payments for honor grades actually motivated the low achieving students or rewarded those already doing well. Were there any pressures on teachers to inflate the grades? What extra assistance was offered students who earned D grades but were considered low achievers? The L.G. Balfour Foundation in 1988 provided a grant of $1 million to the Northeastern University Academy, now the Balfour Academy, which provides a six week academic and tutoring program for junior and senior high school students whose grades are too low to get into college. Students subsequently go to colleges anywhere in the nation. The policy and evaluation questions include how much of a carrot to provide students already doing well in urban high schools and how much extra help to offer high potential students who have not done well in the middle grades.

The ACCESS program is just graduating the first class of college seniors. ACCESS retention figures show that the percentage of ACCESS assisted college freshmen going on to sophomore year exceeded 80 percent, a dramatic improvement. The number of Boston public high school graduates going on to some form of post-secondary education rose from 50 percent early in the decade to almost 60 percent in 1988.

However, ACCESS program administrators met a constant barrage of difficulties such as a few campus aid officers wanting to deduct the ACCESS award from the total funds provided by the college. Although aid officers must eliminate any over-awards, some students may be stranded with a gap of $500 or $1,000. Even a relatively small amount of "unmet need" can make college impossible for a youth living in a family at or below the poverty line. Unlike more affluent youth, the low income student usually does not have an uncle or grandparent to fill the dollar gap, or pay the ever-present college fees.

Besides money, another key ingredient to insure that urban, so-called "at risk" students stay in college is emotional or survival support. Large urban universities can be cold, faceless, impersonal places. Advisers may simply be instructors or professors who sign a course registration card but are too busy with other duties to notice or help an insecure urban student. ACCESS provides mentors and a constant flow of advice and encouragement.

Other Policy and Research Questions

Well-educated, middle and upper income individuals may conclude that any inner-city "at-risk" student would be fortunate indeed to have the types of assistance and encouragement offered in the several cities and states. However, there remain some very fundamental questions.

1. How much can be done to increase college participation if the basic preparation for college is weak? Or if a high proportion of urban youth is malnourished and lethargic in school? Too few city high schools offer a fully comprehensive curriculum with enough well-trained, experienced teachers of mathematics and science. Too few students complete essays often enough to write well. Preparation for college requires much more than test practice during junior year on college admissions examinations; the twelve or more grades preceding college must provide a solid academic foundation.

2. Can the safety of students in urban schools be assured? Raymond Flynn, Mayor of Boston, in 1986 warned those raising funds for ACCESS that too many students in cities would succumb to cocaine addictions to ever benefit from further education. Other education workers report gangs and drug dealers in the streets and school yards.

3. Will early awareness efforts in middle schools be early enough and potent enough to counteract the peers and neighborhood persons who scoff at college attendance as a waste of time, and otherwise actively discourage thinking about staying in school? Some intelligent students are suspended often, held back in their grade, and tracked into non-college programs by educators who feel that only students conforming to typical norms should have the right to apply to college. How can schools and employers work with parents of students to raise expectations, to realize college is affordable, to understand their aspirations for their children can be realized?

4. Can foundations and corporations make enough of a difference beyond indicating support of major changes in urban education and talent development? William Julius Wilson in The Truly Disadvantaged documents a dramatic drop in urban demands for unskilled labor and a surge in demands during the 1980's for graduates with technical and professional skills. A national strategy of economic development is required to shift efficiently the labor force to higher-valued production. If so, students need more help than pre-tax contributions can provide; thus, the interest by Florida, New York State, Massachusetts and other states in expanding state-supported centers of excellence, federal talent search grants, early awareness and other

interventions along with lifelong retraining strategies. What may be crucial is the use of private venture capital to demonstrate the worth of new approaches but followed up by collaboration with government agencies as well as consortia of colleges and universities.

Frequently the solution includes advice to students either from an adult mentor, perhaps from a donor corporation, or a slightly older student from the same city neighborhood or comparable circumstance. Support from a caring individual can be crucial to a student's decision to remain in school. This fact persuaded the ACCESS staff to provide newsletters and frequent follow-up help to those students moving through the college years.

Higher education by the year 2000 will cost more than $100,000 for many selective independent colleges and $50,000 at residential public universities. The stakes are very high. Not every student in grade 7 or 8 will earn enough A's to assemble $5,000 or $10,000 in accumulated cash and if they do, it may pay for only one semester. Some students will survive family crises or neighborhood temptations to drop out and will graduate, need help, and deserve as much assistance as our combined philanthropic and governmental systems will provide. What is important is that all children in a city or county have the opportunity to benefit from higher education.

The Cleveland and Boston models offer a total program to all inner-city youth that may serve their needs better than the simple adopt-a-school model. New York and other states may soon pay for early awareness, mentoring and urban scholarship counseling for many city students. However, corporate and foundation support for start-up, demonstration, and city-wide programs will be crucial ingredients of college opportunity and economic development programs in the 1990's.

EARLY AWARENESS

The Education Resources Institute (TERI) provides information and counseling services about careers and higher education through the Higher Education Information Center (the Center) which is a division of TERI. This includes adults as well as early awareness activities.

OVERVIEW

In October 1988, the Higher Education Information Center completed its fourth full year of assisting people throughout the Boston area and across Massachusetts with planning for higher education. Since opening in 1984, the Center has helped more than 147,000 people learn about education, financial aid, and career opportunities. In 1988 alone, the Center served more than 66,000 people, a 55 percent increase over the previous year.

1988 Highlights

More than 14,000 people visited the Center's offices for information, advice, and application assistance, an increase of 40 percent over 1987. 11,000 Boston Public School students participated in educational awareness activities organized by the Center. Eleven new cities joined the Center's Statewide Youth Educational Awareness Program, bringing the total number to 17. More than 28,000 students and parents in these cities received information and encouragement.

The Chancellor of the Massachusetts Board of Regents selected the Center to coordinate a special project to reach disadvantaged groups with information about the availability of financial aid for educational costs. The Center became responsible for the publication of "Educational Opportunities of Greater Boston for Adults," a well-known directory of more than 7,000 courses and programs, published previously by the Educational Exchange of Greater Boston.

INFORMATION AND COUNSELING

More than 24,000 people used the Center's information and counseling services in 1988.

Summary of People Using Information and Counseling Services

	No. Served
In-person information and advice	12,214
Educational Opportunity Center (EOC) clients	1,996
Telephone information (Career and Learning Line)	9,859
Total	24,069

Approximately 35 percent of the Center's visitors were high school age, while 65 percent were over 19 years old. Although ethnic/racial information was recorded only for EOC clients, the staff estimates that 60 percent of the Center's visitors were racial minorities. Of the EOC clients served in 1988, 54 percent were black, 24 percent Hispanic, and 22 percent Asian.

Educational Opportunity Center (EOC) Clients

Most of the Center's EOC clients continued to be people whose parents are not college graduates and whose lack of familiarity with the college and financial aid application processes make it difficult for them to plan for higher education.

Type of Information/Assistance Provided by User Groups

	EOC Clients	Visitors	Career and Learning Line Callers
Financial Aid	76%	56%	60%
School/College/ Training Program	41%	40%	44%
Career/Occupational	36%	14%	6%

Information Resources

The Center's extensive array of print, computerized and video resources expanded in 1988. College Explorer, a computerized guidance system, was installed, and many more people used the Guidance Information System (GIS) and SIGI PLUS than in previous years. The video collection also grew, now encompassing more than 400 colleges and 165 careers.

Outreach

In addition to assisting people who visit or call the Center's offices, the counseling staff engaged in active outreach efforts to bring information and guidance to low income adults, out-of-school youths and disabled people. More than 900 people at 24 different agencies in the Boston area were served through these outreach efforts. Center counselors conducted career exploration workshops, provided financial aid application assistance, and helped people individually plan for further education.

To reach lower income and minority populations who do not think of themselves as having educational opportunities, the Center conducted outreach efforts publicizing the availability of financial aid and educational programs in Massachusetts. Posters, fliers and newsletters were developed and distributed to schools, social services agencies, churches, and other organizations in low income communities. In addition, frequent press releases and public service announcements were sent to newspapers and radio stations across the state, resulting in articles in more than 40 newspapers, and public service announcements on major radio stations.

YOUTH PROGRAMS

In 1988, the Center's Youth Educational Awareness Programs reached more than 42,000 students and parents in Boston and 17 other Massachusetts cities with significant low income and minority populations.

People Served through Youth Programs

	No. Served
Boston Public School students and parents	11,042
Other participants in Boston area workshops and special events	2,843
Statwide Youth Educational Awareness Program	28,368
Total	42,253

Boston Youth Outreach

More than 11,000 Boston Public School students participated in educational awareness programs designed to increase their knowledge of post-secondary and financial aid opportunities, and to motivate them to continue their education. While these efforts primarily targeted students in grades 9-12, last year for the first time, the Center also provided programs for eighth grade students. Educational awareness programs were held in school classrooms, college campuses and at community sites such as churches and youth centers.

Educational awareness activities included early awareness workshops for students in grades 8-11, campus bus tours, the Peer Advisor Program for students in grades 9 and 10, the Career School Expo and financial aid information booths at college fairs.

In addition, thousands of educational awareness pamphlets were distributed to students and parents. Developed by Center staff or obtained from other organizations, these handouts included occupational information, school lists, financial aid brochures and a guide to the college and financial aid application process, available for the first time in Spanish as well as English. New educational awareness materials developed by the Center in 1988 included a guide to locating scholarships from private sources and "Higher Ed News", a newsletter for eleventh and twelfth grade students.

Center staff also assisted other organizations with educational awareness activities. The Center again served as local coordinator of the Student College Interview Session sponsored by the National Scholarship Service and Fund for Negro Students (NSSFNS). More than 2,500 students from Boston and throughout eastern Massachusetts and Rhode Island attended this event. Staff conducted workshops for parents at financial aid fairs sponsored by Congressional offices and others. The Center also assisted with the development of college and career awareness segments for teen oriented television programs.

Statewide Youth Educational Awareness Program

In 1988, the Statewide Youth Educational Awareness Program expanded from five to seventeen cities. More than 28,000 students and parents in these cities participated in educational awareness activities and received information on schools, careers and financial aid.

The Statewide Youth Educational Awareness Program is an outgrowth of the early awareness programs originated for Boston students. Now in its third year, the program's goal is to inform middle and high school students and parents who lack awareness of post-secondary programs of the opportunities available, and to encourage students to complete high school and continue their education.

During 1988, educational awareness activities were organized in each city by more than 200 volunteers recruited from the public schools, area colleges, and community agencies. The Center assisted volunteers with planning and implementing activities, trained people to conduct workshops and identified speakers and other program resources. The Center also provided informational publications for students and parents participating in awareness activities.

EVALUATION

Although we at TERI are proud of the Center's services, we are always searching for ways to prove that our services are effective. A recent survey of the Center's services was conducted by Haviland Associates of Worcester, Massachusetts and provided the following observations:

The Center is providing a high volume of service to the population it has a mission to serve.

More than two-thirds (68%) of clients in the population under study were low-income/first generation college students. A wide range of people use the Center: youth, young adults and older adults; people of different races, languages, and ethnic backgrounds.

A high level of satisfaction with information and application assistance was found among former clients.

Information. Most clients said that information provided by the Center was very helpful; more than 98% said that the Center staff answered their questions about financial aid.

Application Assistance. "Help was provided" said 94% of 1986-87 clients and 100% of the 1987-88 clients who asked for financial aid application assistance (or assistance in applying for admission.)

Application assistance usually makes the difference in the client actually completing a financial aid application.

Securing Financial Aid. Two-thirds of clients said that they would not have completed their aid application without the staff person's help.

Gaining Admission. Half of the clients said they would not have completed their admission application without the staff person's help.

Fee waivers for aid, tests and admissions were helpful and important, especially in applying to several colleges.

Waivers were used and were helpful. 83% to 100% were used, depending on the kind of waiver.

Waivers and Choice. Half of all clients who used waivers stressed the Center's help in "...gaining enough waivers to apply to three, four or five colleges."

Career services received mixed reviews from 1986-87 clients but very positive ratings from 1987-88 multiple contact clients.

The Center is helpful in other ways, too.

"Was the Center helpful in any other way?" brought broad, subjective responses:

"I got emotional help...someone on my side." "They gave me encouragement and help with a report, a report eventually published in a local magazine." "They gave me information on deadlines which I had missed earlier." "They told me about other services available, about other organizations that offer scholarships." "Center staff provided assistance with explaining things I didn't understand in English...they carefully explained everything to me." (a young Asian college student)

The Center does not, in fact, duplicate services readily available at high schools, colleges and agencies. Rather, its package of services significantly enhances access and choice.

High Schools. Most high school students received some information about colleges at their high school before coming to the Center for more information, application assistance and fee waivers.

Out-of-School Clients. Most of these clients came to the Center first when seeking to go to college.

Clients Already in College. Nearly half of the clients already in college came directly to the Center; others came later for more aid information or for application assistance not provided at their college.

Most clients said they had not worked with a guidance counselor earlier in their high school years but those who had done so said the counselor had been helpful. College retention was found to be high--above 80% two years later. Those who did not stay in college (17%) most requently said, "Financial aid was not enough" or "There were too many life pressures on me." Clients who intended to start college but did not do so also emphasized financial matters. In giving college another try, the most important factors were more cash or income, followed by lower college costs/more financial aid and "college teachers that would take an interest in me." When clients were asked, "What can the Center do to help more people?" most responded, "The Center is fine." One-third of those served two years ago added, "It needs to publicize its services more."

We are proud of the findings outlined in this study, but we know the study wtill does not confirm that early awareness activities really make a difference in career choice or educational attainment for the population we serve. Therefore, we will continue to provide the services with a commitment to survey and analyze further the effectiveness of those services.

"The Effectiveness of Early Awareness Program Information"

by

Jerry S. Davis
Director of Research and Policy Analysis
Pennsylvania Higher Education Assistance Agency

My remarks this morning are based on research PHEAA has been conducting on the student and parent participants in an "early awareness" project sponsored by the Pennsylvania Association of Colleges and Universities called the Project for An Informed Choice. Because our time is limited, my presentation necessarily represents a summary of our findings. The details of the research on the students will be published in the next issue of the NASFAA Journal. The details of the research on the parents will be published later this month in a PHEAA report. If you want copies of either report, please let me know and we'll forward them to you.

I believe all "early awareness" projects are faced with two basic problems. Students (and their parents) cannot be expected to acquire knowledge of career options, educational opportunities, available financial aid, and of other matters related to postsecondary activities unless and until they are willing to pay attention to such matters. So the first problem is one of motivating students (and parents) to pay attention to matters they might not consider important when the student is a youngster in junior high school.

The second problem concerns the content of what is to be learned by participating in different planning activities. Junior high school students cannot be expected to learn and retain much cognitive information about careers, colleges, or admissions and financial aid practices three to five years before the information will be applied. Parents might be expected to learn and retain such information, but I am not certain many will do so. Moreover, what is true and might be learned by a seventh grader, or a seventh grader's parents, will not necessarily be true and useful by the time the child reaches the twelfth grade.

Our research has focused on the first problem, i.e., determining which students and parents are willing to participate in different planning activities. We believe that "early awareness" projects can help students and parents develop greater awareness of and interest in career and educational opportunities and the need to better plan for them. Projects can enhance student and parent willingness to receive information postsecondary opportunities and to respond to the information. Projects can also achieve valuing objectives concerning such things as acceptance of the value of certain postsecondary activities (such as attending a college or vocational school), preference for the value in planning for and participating in activities leading to attendance, and a commitment toward achieving postsecondary goals.

We designed and administered surveys to students and parents which are intended to help Project staff learn what planning activities are of interest to which students and parents. In other words, we want to learn which planning activities students and parents will readily receive and to which activities they will readily respond. If the staff know these things, then they can tailor Project activities accordingly. If the Project is successful, we expect that by the time we administer the surveys at the Project's end we will see significant increases in willingness to receive and respond to planning activities.

So what have we learned from our surveys? Let me first discuss the results of the student surveys. Our findings suggest that many "early awareness" activities are unlikely to be well-received by significant proportions of junior high school students, especially if they say they are planning to get jobs right after high school or are undecided about what they will do. However, junior high school students who already consider themselves "education-bound", particularly those planning to attend four-year colleges, generally are willing to participate in many activities that should help them to begin preparation for postsecondary education long before the eleventh or twelfth grades. Therefore, "early awareness" programs can provide valuable activities that will reinforce student plans at times when crucial decisions are made, for example, choosing the best program of studies or making early decisions about saving to meet college expenses. Activities that are traditionally made available to eleventh and twelfth graders can effectively be offered to junior high school students who are "education-bound."

The data suggest that attempts to target activities on young students with the intention to encourage more "vocation-bound" or "undecided" students to participate in postsecondary education are unlikely to be successful, because these students display low levels of interest in participating in typical activities that are featured in many "early awareness" programs and because their values of postsecondary activities are at relatively low levels. "Vocation-bound" and "undecided" students generally are unwilling to read materials on colleges, college costs and financial aid, or careers; are reluctant to seek information and advice from counselors and teachers; and are unwilling to participate in school-sponsored events such as "college nights" or "career days." These students are willing, however, to use computer-based guidance programs to learn more about postsecondary opportunities and to pay attention to information provided through video cassette or film media. (These latter findings suggest that the thousands of dollars spent on print media to help enhance postsecondary education participation rates are in many instances wasted.)

Research on these Project students and on other junior high school students in Pennsylvania demonstrates that their postsecondary plans are directly related to their perceptions of what their parents want them to do after high school. For example, 85 percent of these Project students who believed their parents want them to continue their education after high school said they planned to do so. Only 24 percent of the Project's "vocation-bound" and "undecided" students said their parents wanted them to continue their education and another 49 percent of these students said their parents had permissive, indifferent, or unknown attitudes toward their postsecondary activities.

Therefore, unless "early awareness" projects target activities on the younger students' parents as well as the students themselves, it is unlikely that the projects will shift many students from a "vocation-bound" or "undecided" category to an "education-bound" category.

Although it may be considered difficult to develop programs which involve parents in their children's postsecondary planning processes and activities, our survey of the Project students' parents demonstrates that there are many potential ways this can be done. Perhaps our most important survey finding is that over three-fourths of the parents strongly agreed that their children will need more education to get a satisfying job and even four out of ten parents who said they wanted their children to pursue vocations immediately after high school felt this way. Six out of ten parents who said they had no strong preferences for their children's activities or were leaving the decision up to their children strongly agreed that their children would need more education to get a satisfying job. Only 4 percent of the parents strongly agreed that their children could get satisfying jobs without further education. These findings indicate that many parents believe their children need more education. This being the case, it appears that it should not be hard to persuade most parents to participate in activities designed to help their children obtain more education beyond high school.

The parent survey indicated that over nine out of ten parents were willing and would like to to do three things with their children: (1) encourage them to spend more time studying to improve their grades; (2) talk with their children about their plans for education after high school, what schools they might attend, and how to pay for the costs; and (3) talk with their children about the kinds of jobs they might get after completing their education. There were five other activities that at least three-fourths of the parents said they were willing and would like to do. These include listening to a talk on financial aid; attending a "college night" program; talking with their children's counselors or teachers about the kinds of courses the students need to achieve their postsecondary goals; helping their children look for an after-school or summer job to help earn money for education; and attending a school-sponsored "career day" program.

At least six out of ten parents said they were willing and would like to do five things: (1) seek advice from the school staff on occupations their children might pursue; (2) visit a postsecondary institution to find out about its programs and admissions requirements; (3) help their children look up career information in a library; (4) look through reference books on colleges; and (5) go with their children to a Saturday program at a college or vocational school to learn more about postsecondary opportunities.

That parents generally place a high value on postsecondary education for their children is evidenced by the finding six out of ten parents said they would like to regularly deposit money in a savings account for their children's education. However, only 32 percent of the parents said they would like to accept a long-term loan to help pay for educational costs. But another 30 percent said they would be willing to do this. Only 20 percent said they would not be willing to accept a long-term loan and the remaining 18 percent were uncertain how they felt about educational loans.

Thus it appears that parents are more willing to save than they are to borrow to meet their children's educational costs. These findings have some implications for policymakers who are considering savings plans at a time when loans are increasingly used to meet college costs.

The types of education the parents favored for their children made little difference in their interest in participating in most activities. There were, however, some noteworthy differences. For example, 81 percent of the parents who wanted their children to attend four-year colleges, but only 57 percent of the parents who wanted their children to attend other types of institutions, said they would like to look up information on colleges in reference books. Parents who favored four-year colleges were slightly more likely to say they would like to visit a particular institution with their children, 82 percent versus 74 percent. And they were more likely to say they would like to attend a Saturday event on some campus to learn more about postsecondary educational opportunities in general, 74 percent versus 61 percent. The parents who favored four-year colleges were 15 percent more likely to say they would like to save for their children's education, 70 percent versus 55 percent. And parents who favored four-year colleges were about 6 percent more likely to say they would like to accept a loan to help pay college costs.

Only eight out of the fifteen activity items on the survey received positive "preference scores" from the parents who wanted their children to get jobs or join the military after high school. As expected, these parents generally were less willing than parents of "education-bound" students to participate in the planning activities. However, half said they would like to attend a "college night" or a "career day" event and half said they would like to talk to their children about postsecondary educational opportunities. Just under half said they would like to help their children go to a library to look up information on careers. Therefore, it appears that a significant proportion of these parents are willing to consider postsecondary education for their children.

The parents who expressed indifferent or permissive attitudes about their children's plans generally were more likely than parents of "vocation-bound" students to express willingness to participate in the various planning activities. But they generally were less likely than parents of "education-bound" students to express willingness to participate in the activities. There were, however, just two activities that fewer than half the permissive/indifferent parents said they would like to do: (1) look through reference books on colleges and (2) accept a loan to help pay for the costs of their children's education. So there appears to be considerable willingness among these parents to participate in the various planning activities.

I have prepared one table in transparency form that illustrates the great difference between student and parent levels of willingness to participate in various planning activities. Ten activities were listed as options on both surveys. The table shows the percentages of students and parents who said they would like to participate in the ten activities. On the average, only 48.4 percent of the students but 76.7 percent of the parents said they would like to do the ten activities.

The "gap" between student and parental willingness was widest for the item on listening to a discussion on financial aid. Almost twice as many parents as students said they would like to do this. The "gap" was the narrowest on seeking career advice from the school staff and on visiting a postsecondary institution.

At least half the students and almost eight out of ten parents said they would like to talk with each other about postsecondary education and career plans, attend "college night" programs, and talk with the school staff about the best curricula to pursue to meet the students' goals.

These findings suggest that "early awareness" projects that provide information to parents, and the motivation to use it in discussions with their children, are likely to be more successful at increasing students' postsecondary education participation rates than are projects that work only with junior high school students through activities traditionally employed with older, senior high school students.

This is all we have time for this morning. I'll be glad to try to answer any questions you might have about our research. Thank you.

This paper was presented at the Sixth Annual NASSGP/NCHELP Research Network Conference on June 8, 1989.

Percentages of Students and Parents Who Said They Would Like to Participate In A Planning Activity

Planning Activities	Students	Parents
Talk to parents/students about jobs/careers	62.0%	88.4%
Talk to parents/students about PSE plans	59.4	89.7
Attend a "college night" program	55.0	81.7
Talk with school staff about best curricula	52.6	78.7
Listen to a talk on financial aid for PSE	43.8	84.4
Visit a PSE institution to find out about it	51.6	71.3
Attend a "career day" program	43.4	74.3
Seek career advice from the school staff	46.0	68.7
Review reference books on colleges	36.8	65.6
Seek career information in a library	33.3	64.5

ABSTRACT

Arthur Hauptman, American Council on Education, "Why Are College Charges Increasing So Fast?"

Dr Hauptman summarized parts of a paper which was jointly commissioned by the ACE and the College Board on why tuition rose during the 1980s. Among reasons given were the need for colleges to increase financial support of their own student aid programs; the decrease in full-time student enrollments, which raised the colleges' fixed costs per full-time equivalent student; increased costs of student marketing and recruitment; and increases in costs of providing remedial and retention services to students.

Carol Frances, a Washington consultant, was asked to comment on the Hauptman paper. She argued that the rate of tuition increase peaked in 1981-82 and has been declining since then. She further noted that tuition increases were needed to restore faculty salaries and that they would not have had to be as large if federal and state student aid had been adequately funded and expanded.

Julianne Still Thrift, National Institute of Independent Colleges and Universities, also commented on the Hauptman paper. She indicated that the rising cost problem comes from the public perception of rising costs at private colleges. She believes this problem is exacerbated by media and public officials who insist on quoting the weighted average costs (costs by numbers of enrolled students) at private colleges rather than quoting average tuition costs by institutions. The private colleges with the larger enrollments have higher tuitions and that many smaller private colleges have modest tuition charges.

ABSTRACT

Patricia Smith, American Council on Education, "National Service and Student Aid."

Ms Smith briefly described the historical bases for the recent public interest in "national service" proposals requiring young persons to participate in community or military service. She described the several "national service" bills before Congress, devoting special attention to bills which link prior or future service to receipt of financial aid for postsecondary education. Ms Smith indicated that although "national service" proposals have considerable appeal to many legislators, it is unlikely that legislation to make service a prerequisite to receipt of student financial aid will be passed.

Further Exploration of
the Distribution of Higher Education Subsidies

by

John B. Lee
Marilyn Sango-Jordan

National Center for Postsecondary Governance and Finance
University of Maryland

Summary of Findings
Presented at the Sixth Annual
Student Financial Aid Research Network Conference
Washington, DC
June 1989

An earlier paper by Lee (1987) introduced the total subsidy concept and discussed the apparent overall equity of the distribution of higher education subsidies. The outcomes of the mechanisms affecting subsidy distribution were addressed. The current study looks in more detail at those mechanisms and resulting subsidy distribution patterns.

Total subsidy is defined as all money from non-familial sources available to fund a student's higher education. Direct student subsidy includes all grant and scholarship aid and the estimated grant equivalent of subsidized student loans. Institutional subsidy is the difference, if any, between the institutional expenditure required to educate a given student and the amount of tuition charged.

Total subsidy is the sum of direct student subsidy and institutional subsidy. The two components may respond in differing or even opposite ways to external forces. Therefore, the prediction of total subsidy amounts is more difficult than that of either student or institutional subsidy.

The current study examined the effects of demographic factors on subsidy distribution both directly and indirectly through the type of college attended. The effects of college features were also considered. Regression analyses were performed and a path model proposed to enhance understanding of the variable interactions. The model was applied to all college students and also separately to aid recipients and non-recipients. The High School & Beyond (HS&B) Senior Cohort Third Follow-Up data and Financial Aid Supplement were used.

Income category had consistent direct negative effects on total subsidy through the student subsidy component. Many student financial aid programs, particularly grant programs, are need-based. Income was the best demographic predictor of student subsidy.

Ability had direct positive effects on total subsidy for the attender group and on institutional subsidy for non-recipients. There were indirect effects from ability in both positive and negative directions. The total effect of ability was equal to that of race and income for all students. Ability was the best demographic predictor of subsidy for non-recipients and a close second to income in predicting student subsidy to aid recipients.

Race (being from a minority group) had direct positive effects on total subsidy due to its role in institutional subsidy. Within institutional categories of control, length, tuition, and size, minority students went to schools which offered larger institutional subsidies than did white students. Students from minority groups also received more direct subsidy dollars than did whites but this differential was based on their lower incomes.

The demographic variables jointly explained only one percent of the variance in institutional subsidy amounts, eight percent of the variance in student subsidy amounts, and five percent of the variance in total subsidy amounts.

Several institutional characteristics were examined as to their independent and joint linear effects on subsidy amounts. They were control (private non-profit versus public); length of program (less than four-year schools, four-year institutions without doctoral programs, colleges with doctoral programs); dollar amount of tuition; and size as measured by head-count enrollment. These institutional measures were weakly influenced by the student demographic variables, especially ability.

The institutional variables were entered into regression analyses to determine their combined effects on subsidy. The four variables jointly explained 20 percent of the variance in institutional subsidy. Control and length had relatively strong positive effects on institutional subsidy while tuition and size had somewhat weaker negative effects. Institutional subsidy tended to rise with public control and longer programs and to decrease with higher tuition and higher enrollment. Each of these effects was independent; that is, interactions among the institutional variables were screened out.

The four institutional variables explained 21 percent of the variance in student subsidy. The positive effect of tuition was the most important in explaining student subsidy amounts, with a weaker positive effect from length. Slight negative effects from public control and larger size were no longer significant after the intercorrelations of the independent variables were taken into account.

Explanation of the variance in total subsidy amounts was less comprehensive, with only eight percent of the variance explained by the four institutional variables in the regression. This was because two of the key variables worked in opposite directions on the dual components of total subsidy. Control had a relatively strong positive effect on institutional subsidy and a weaker negative effect on student subsidy. Tuition had a strong positive effect on student subsidy and a somewhat weaker negative effect on institutional subsidy. The examination of the effects of the institutional variables on each component of total subsidy showed why explanatory power was weaker for the total than for either of the components.

A possible multicollinearity problem was noted since control and tuition were extremely highly correlated. The regression weights for the effects of college characteristics on subsidy amounts were compared with the zero-order correlations. Because the zero-order correlations were stronger and in the same direction, both variables were left in the model. Very different effects on the subsidy components were noted for the two variables, so both were considered useful in assessing the influences of college type on subsidy.

The regression analyses showed that the kind of college attended was much more important in explaining varying dollar amounts for the two components of total subsidy than were individual student demographic characteristics. Student characteristics explained less than ten percent (one percent and eight percent respectively) of the variance in institutional and student subsidy. Knowledge of the type of college attended could be used to explain fully one-fifth of the variance in dollar amounts for each subsidy component.

When both sets of characteristics were entered into the regression equations, 21 percent of the total variance in institutional subsidy could be explained. The demographic and college characteristics jointly explained 30 percent of the variance in student subsidy and 12 percent of the variance in total subsidy.

Explorations were conducted of the exact interactions among the demographic and college characteristics in explaining the variance of the three subsidy measures. A path model was introduced to specify the direct effects of demographic and institutional variables on subsidy amounts as well as the indirect effects of demographic characteristics through their connections with college type.

For all college students, the path model explained 12 percent of the variance in total subsidy, 21 percent for institutional subsidy and 29 percent for student subsidy. Fifteen percent of the variance in subsidy was explained for non-recipients. The explanatory power of the model was best for aid recipients, accounting for 17 percent of the variance in total subsidy, 34 percent for institutional subsidy, and 37 percent for student subsidy.

In an April 1989 companion piece entitled "Evidence on the Distribution of Direct Student Subsidies to Undergraduates from the National Postsecondary Student Aid Study (NPSAS)," the authors replicated a portion of the study. The distribution of direct subsidy to full-time undergraduate aid recipients was examined using a recent and more heterogeneous cross-sectional postsecondary sample. Antecedents of direct student subsidy to part-time students were also examined.

Among full-time undergraduate aid recipients, higher-income students were eligible for lower student subsidy amounts except where they attended schools with longer programs and especially higher tuitions. Younger aid recipients tended to go to schools with longer programs and therefore to receive slightly higher direct subsidies. While not significant, the direct effect from race was positive. Going to a higher-tuition school had a strong positive effect on direct student subsidy amount.

Institutional control was not used to predict direct student subsidy in the NPSAS data set due to multicollinearity with tuition. The NPSAS ability variable, grade-point average, was not comparable to the High School & Beyond test quartile. Despite these limitations, 33 percent of the variance in direct student subsidy was explained for full-time aid recipients.

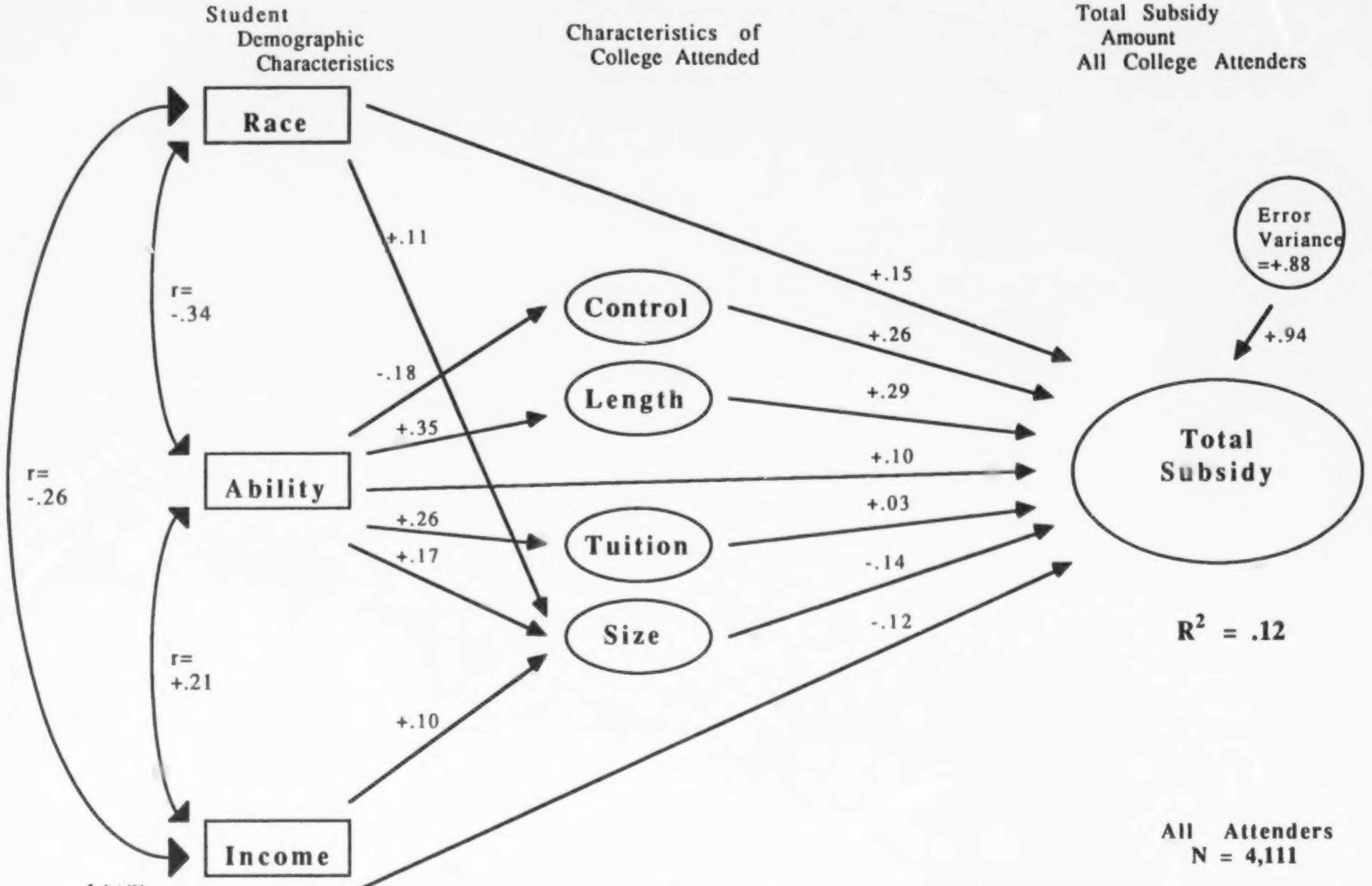
For part-time undergraduate aid recipients, being from an ethnic minority group had a positive direct effect on student subsidy amount. However, being from a minority group also led to attendance at less expensive schools where subsidies tended to be lower. Age was not a significant predictor, probably because older students were the norm among part-time aid recipients. Income actually had a weak positive effect on direct subsidies to part-time aid recipients, although it operated indirectly through the choice of schools with longer programs. Only seven percent of the variance in direct student subsidy was explained for part-time students, indicating that different factors affected financial aid for this group.

The replication basically supported the findings of the major study with regard to the distribution of direct student subsidies. Additional related work is planned or in progress.

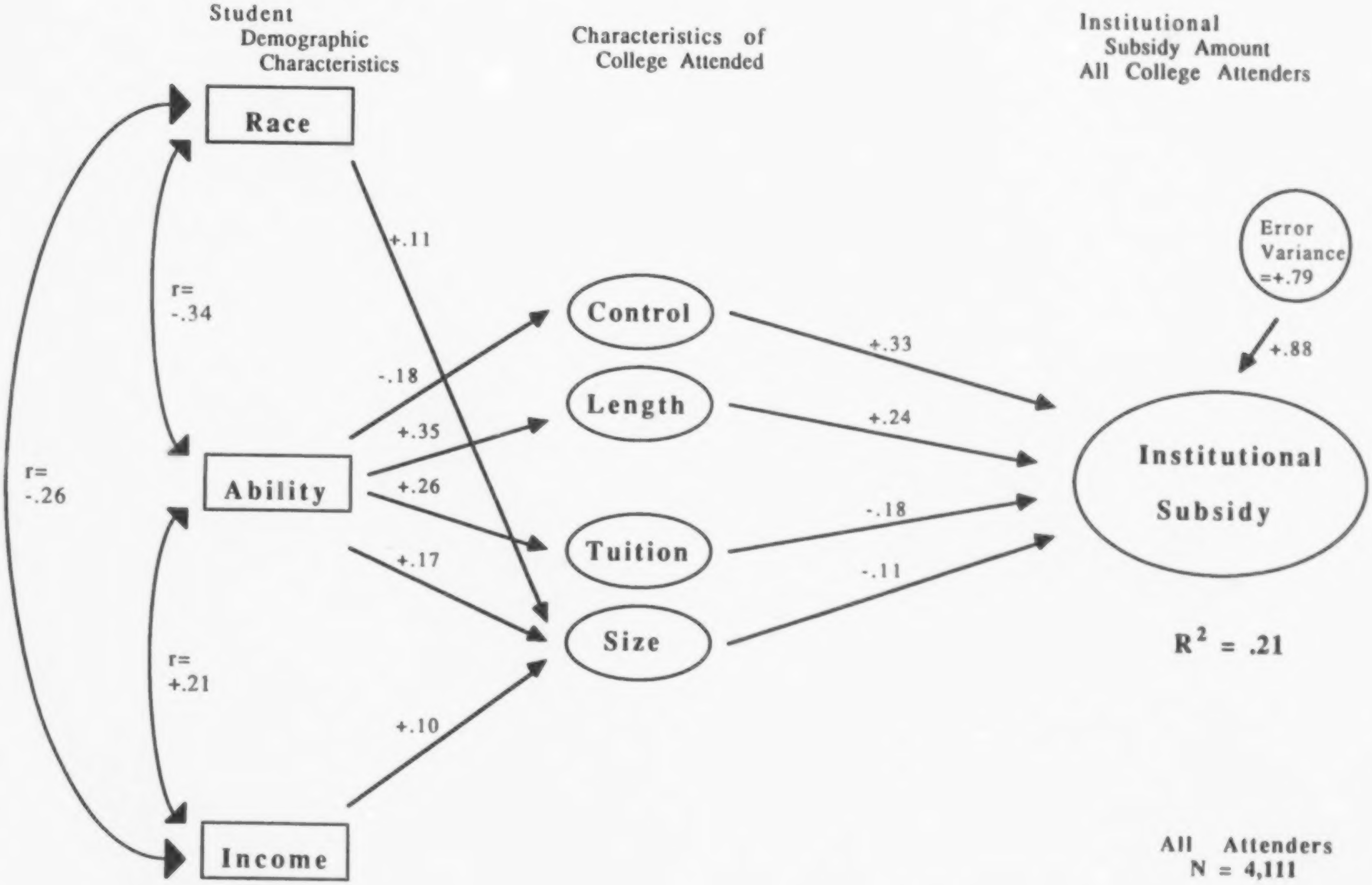
Full-length papers reporting the HS&B and NPSAS analyses are available from Dr. John B. Lee, JBL Associates, 4336 Montgomery Avenue, Bethesda, Maryland 20814. Dr. Lee may be contacted by telephone at (301)654-5154 and Marilyn Sango-Jordan at (518)273-8144.

Path Diagram 1.

Predictors of Total Subsidy Amount for
Private Non-Profit or Public College Attenders, 1980
High School & Beyond Senior Cohort

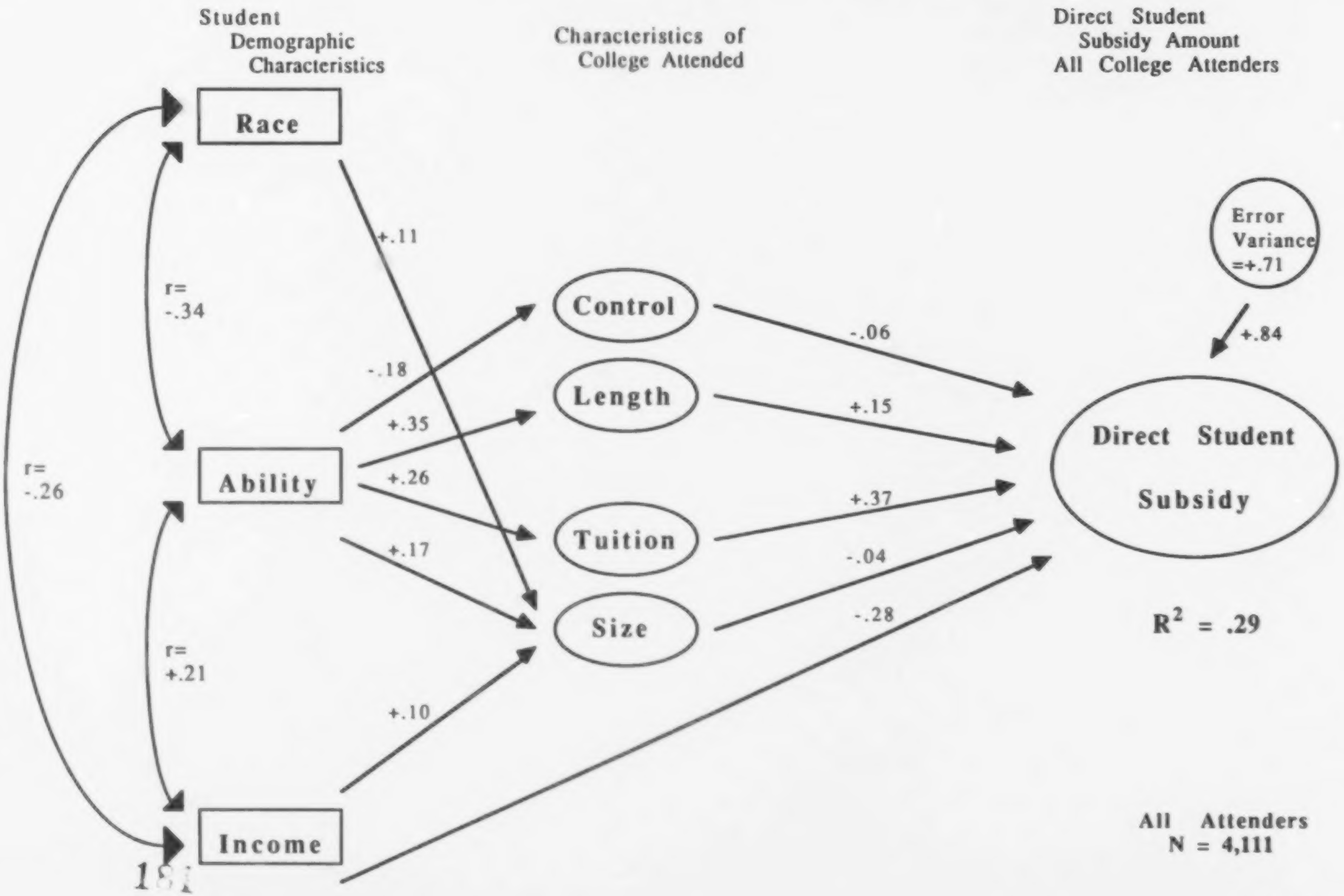


Path Diagram 2.
Predictors of Institutional Subsidy Amount for Private Non-Profit or Public College Attenders, 1980 High School & Beyond Senior Cohort

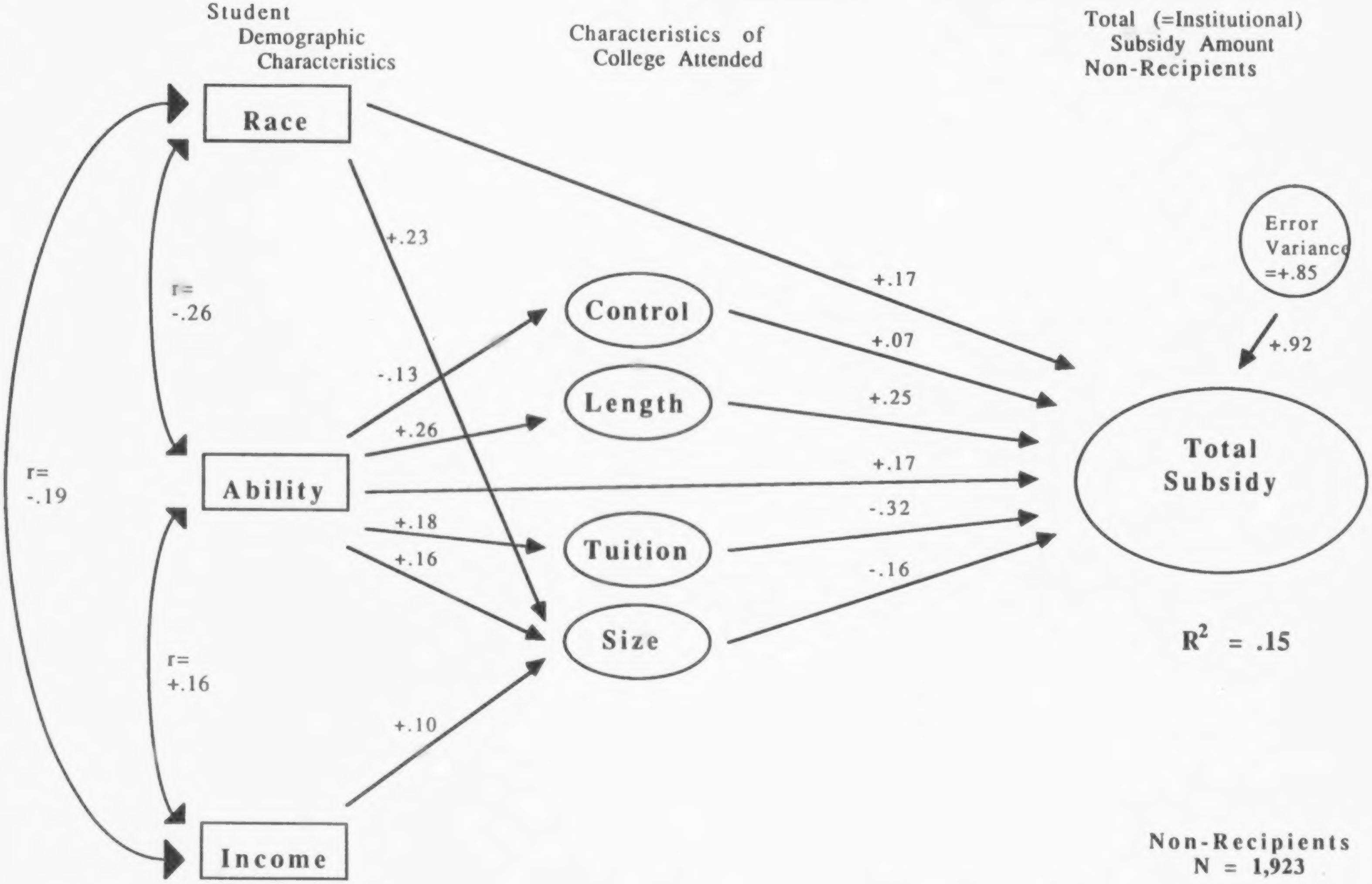


All Attenders
N = 4,111

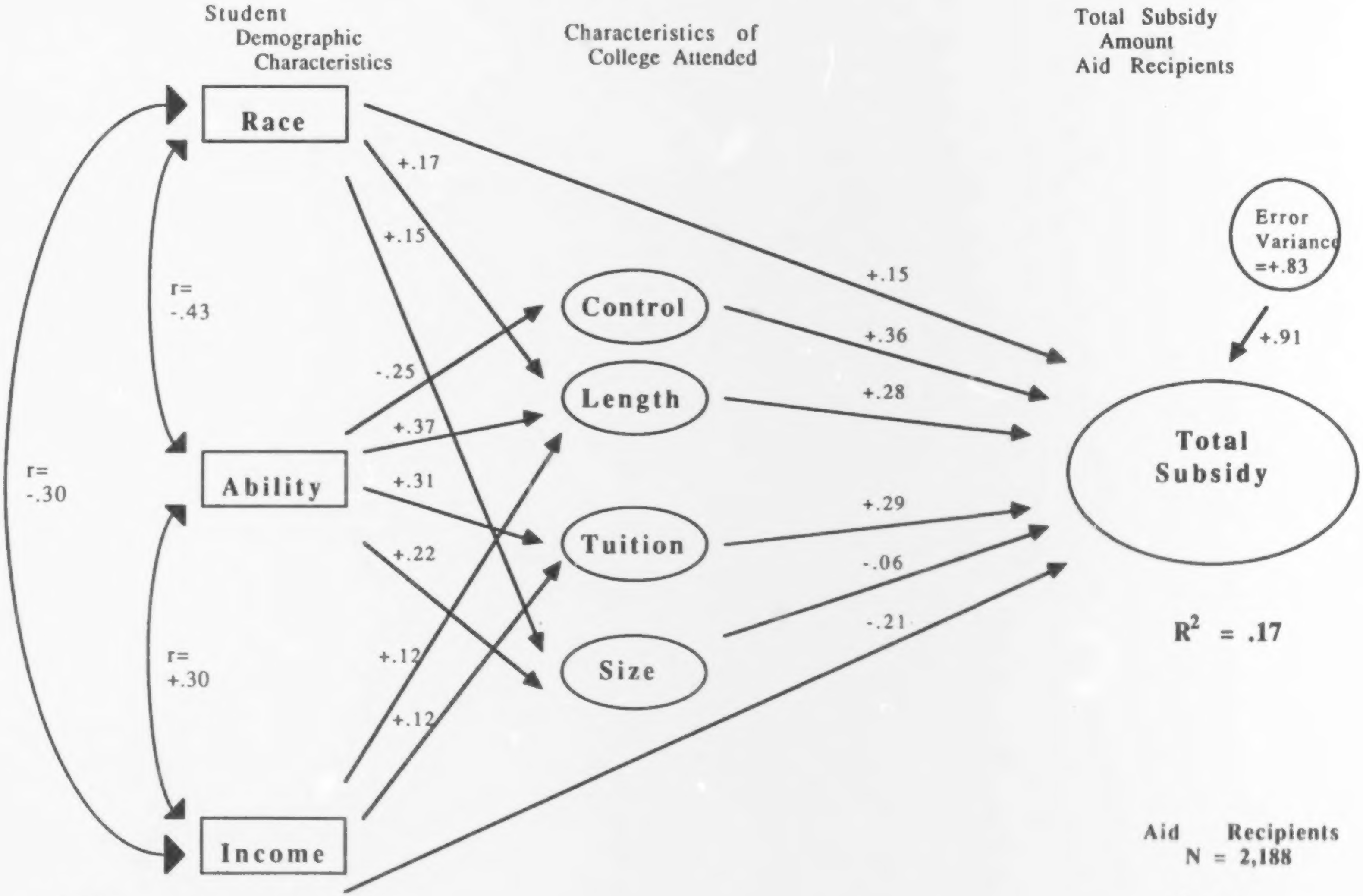
**Path Diagram 3.
Predictors of Direct Student Subsidy Amount for
Private Non-Profit or Public College Attenders, 1980
High School & Beyond Senior Cohort**



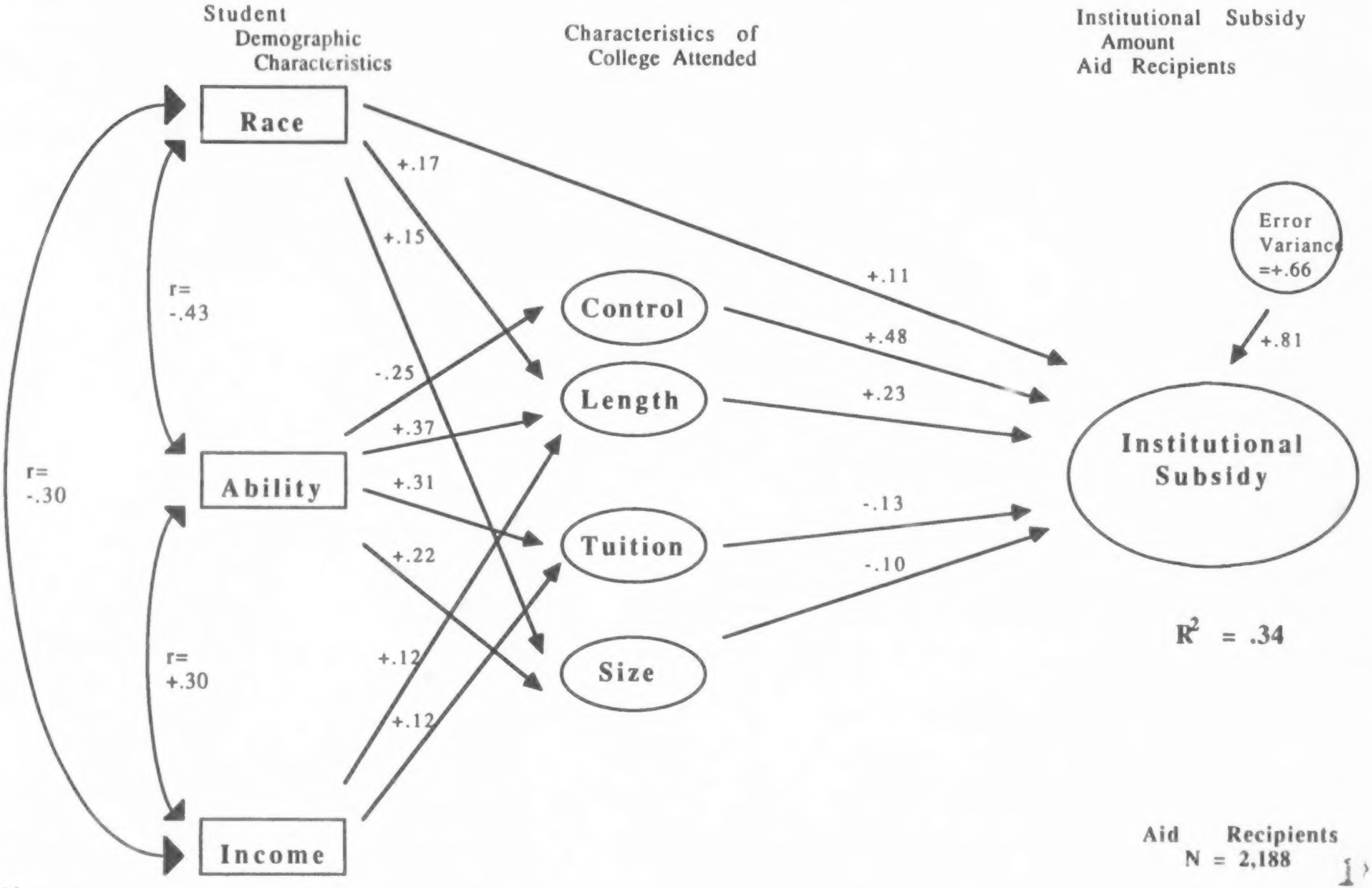
Path Diagram 4.
Predictors of Total (=Institutional) Subsidy Amount for
Private Non-Profit or Public College Attenders Who Did Not Receive Aid, 1980
High School & Beyond Senior Cohort



Path Diagram 5.
Predictors of Total Subsidy Amount for Private Non-Profit or Public College Attenders Who Received Aid, 1980
High School & Beyond Senior Cohort



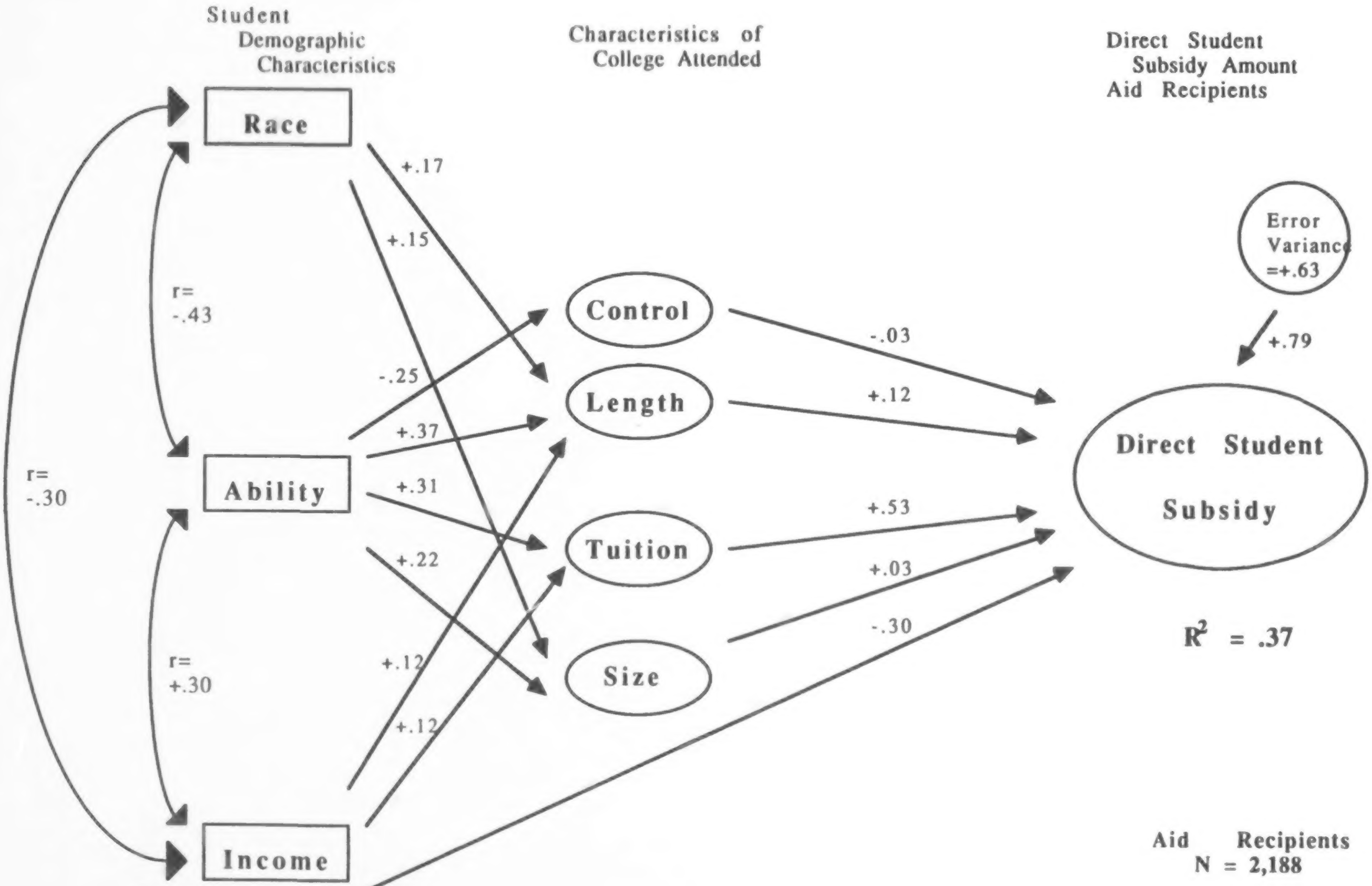
Path Diagram 6.
Predictors of Institutional Subsidy Amount for Private Non-Profit or Public College Attenders Who Received Aid, 1980 High School & Beyond Senior Cohort



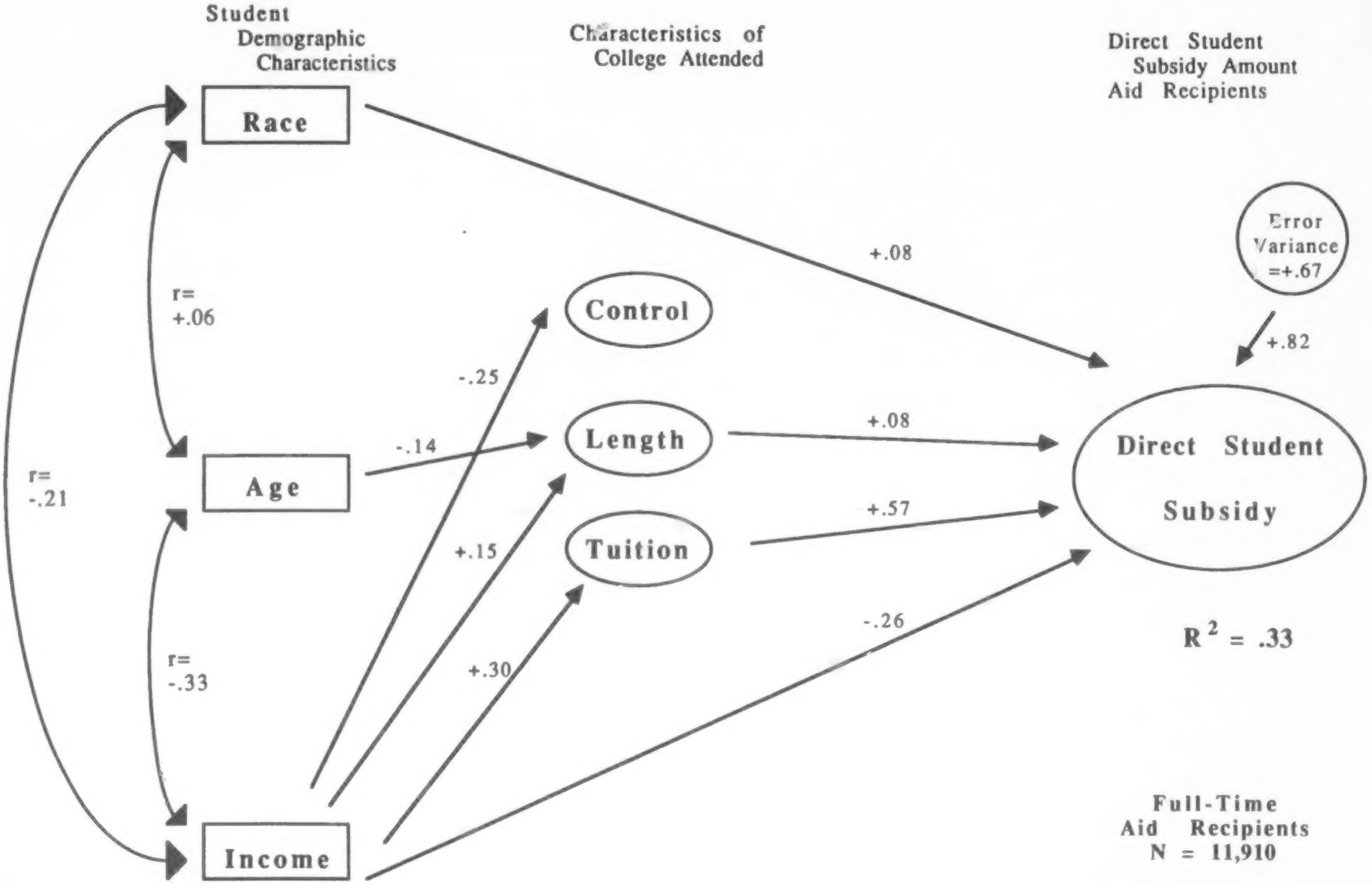
R^2 = .34

Aid Recipients
N = 2,188

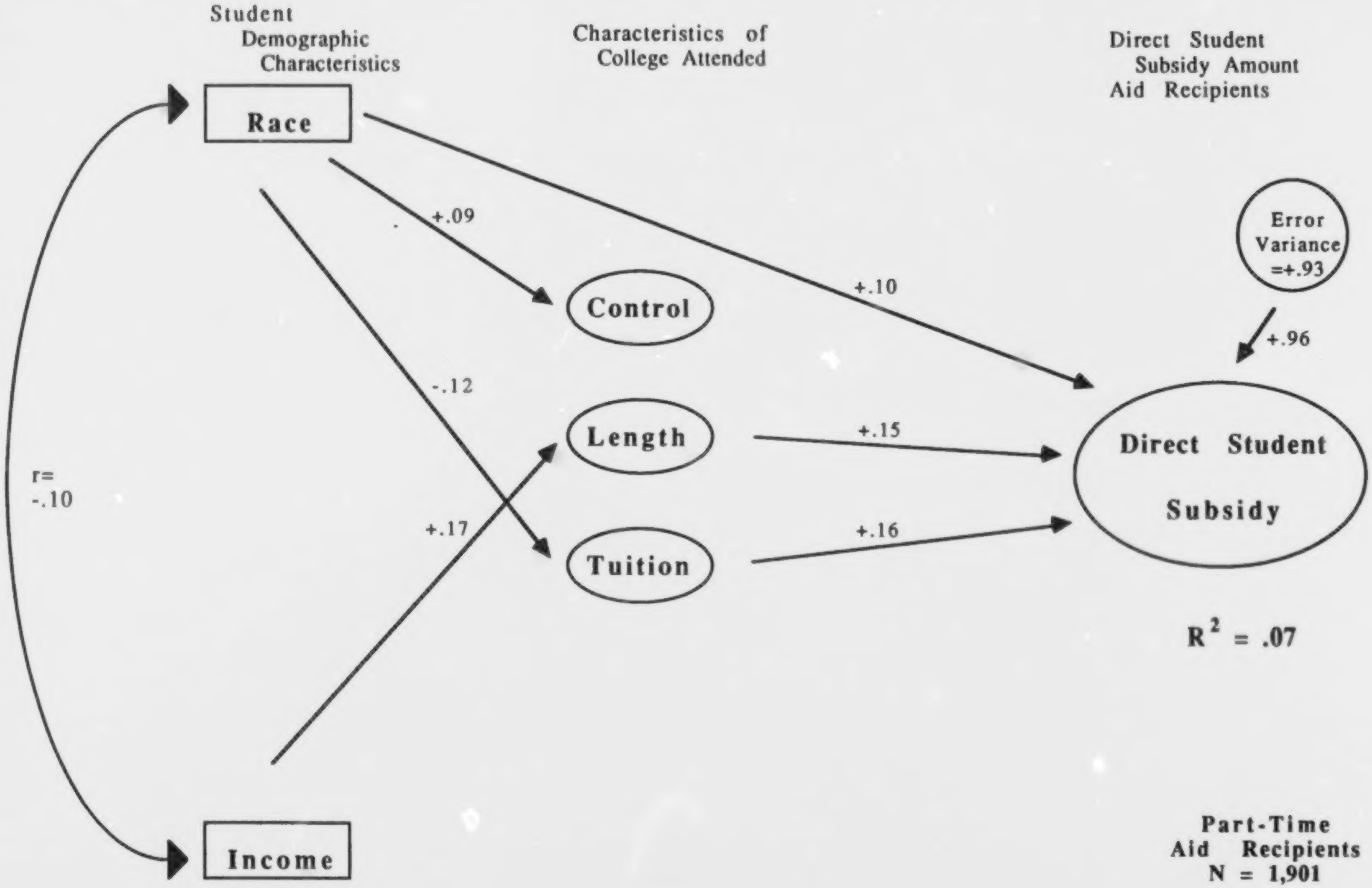
Path Diagram 7.
Predictors of Direct Student Subsidy Amount for Private Non-Profit or Public College Attenders Who Received Aid, 1980
High School & Beyond Senior Cohort



Path Diagram 1.
Predictors of Direct Student Subsidy Amount for Full-Time Aid Recipients at Private Non-Profit or Public Colleges, 1986 National Postsecondary Student Aid Study


Student Demographic Characteristics
Characteristics of College Attended
Direct Student Subsidy Amount Aid Recipients
Race
Age
Income
r= +.06
r= -.33
r= -.21
Control
Length
Tuition
-.25
-.14
+.15
+.30
+.08
+.08
+.57
-.26
Error Variance =+.67
+.82
Direct Student Subsidy
$R^2 = .33$
Full-Time Aid Recipients N = 11,910

Path Diagram 2.
Predictors of Direct Student Subsidy Amount for Part-Time Aid Recipients at Private Non-Profit or Public Colleges, 1986 National Postsecondary Student Aid Study


Student Demographic Characteristics
Characteristics of College Attended
Direct Student Subsidy Amount Aid Recipients
Race
Income
r= -.10
Control
Length
Tuition
+.09
-.12
+.17
+.10
+.15
+.16
Error Variance =+.93
+.96
Direct Student Subsidy
R² = .07
Part-Time Aid Recipients N = 1,901

Student Financial Aid as a Method of Cost Sharing at Private Colleges

by

Donald L. Basch
Associate Professor of Economics
Simmons College
300 The Fenway
Boston, Massachusetts 02115

With need-based financial aid creating differentials in net prices among students, private colleges have implemented a system of cost sharing among current students. This paper provides a conceptual and empirical analysis of the nature of the cost sharing which occurs as a result of college-funded grants. In first describing the overall nature of cost sharing, emphasis is placed on the interaction of the college's comprehensive expense, financial aid packaging policies, and the distribution of students' expected family contribution in determining the extent of cost sharing. Then, estimates are developed of the extent of cost sharing which occurs at a group of New England private colleges. Finally, a suggestion is offered concerning how the cost-sharing perspective may help to explain recent aggregate trends in the relationship of increases in comprehensive fees, institutional student financial aid, and other student financial aid.

1. Introduction

Need-based financial aid offered by private colleges is commonly designed to award higher amounts of financial aid to students from families with lower financial resources. When such aid results in differences in net prices among students at a particular college, the college has implemented a system of cost sharing in which some costs are shifted from more needy families and students to other families and students.

There are, at least, two reasons why a cost sharing perspective-- with its emphasis on distributional aspects of college costs and student financial aid-- deserves thorough study. First, college-funded, need-based aid is clearly an important part of whatever pricing strategies private colleges employ in their rivalry for students. While the presence of cost sharing is widely acknowledged, and is the focus of Johnstone's (1986 and 1987) impressive cross-country study, detailed analyses are not available of the mechanics of cost sharing among current students and their families. Thus, one of the major purposes of this paper is to begin to provide some detail on the mechanics of cost sharing at the micro, individual college level in order, ultimately, to better understand colleges' pricing strategies.

Second, some very interesting trends, documented in a College Board study (Lewis, 1988), have emerged at private colleges in recent years concerning the relationship of rates of increase in comprehensive fees, families' ability to pay, institutional student aid, and governmental student aid. A cost-sharing framework provides an important perspective, at the individual college level, on how such aggregate trends may have emerged.

Taking a cross-country approach, Johnstone (1986 and 1987) has emphasized the cost sharing which takes place among taxpayers, parents, students, and institutions/ philanthropists. The present paper provides a conceptual and empirical analysis of the nature and extent of cost sharing which occurs among current students' families (with no distinction drawn between students and their families) at private colleges as a result of college-funded grants.[1] First, simulations are used to illustrate the nature of cost sharing, and estimates are provided of its actual extent at a group of highly selective New England private colleges. Then, in the context of the cost-sharing framework, an examination is made of the impact of sharp increases in a college's comprehensive expense on the level and distribution of students' actual net expenses. A suggestion is offered concerning how the cost-sharing perspective may explain recent trends in the relationship of increases in comprehensive fees, institutional student financial aid, and other student financial aid.

2. A Stylized Description and Simulation of the Cost-Sharing Effects of Financial Aid

Given the widespread presence of need-based financial aid at private colleges, there is a systematic tendency for students (and their families) with lower financial resources to pay lower net prices for a particular private college's education. A college typically assesses a stated price for all students, but then uses need analysis to determine a student's actual net price, often reflecting a discount from the stated price-- a discount in the form of college-funded grants.[2] Overall, the college collects a certain amount of total payment from students; dividing this total payment by the number of students yields what might be termed the average student payment. Some students pay a net price above the average student payment and, in the terms of the present paper, have costs shifted onto them. Other students, whose net price is below the average student payment, have costs shifted away from them.

Were the college to assess this average student payment on all students-- and not offer financial aid-- it is likely that a portion of low income students would not attend the college. Cost sharing facilitates access of low income students to high comprehensive expense colleges; and cost sharing may be part of a utility-maximizing (or, at least, utility-seeking) approach of colleges, which may be viewed as having access and quality of student body as arguments in their respective utility functions. Hoenack (1971) demonstrates the differential pricing which would occur if the enrollment price elasticity of students varied according to their family income level. Whether the college, subject to a total subsidy constraint, is seeking to maximize its enrollments or is willing to trade off enrollments for more equal representation of different income groups, the college should assess lower prices to lower income students. Extending the Hoenack perspective, Ehrenberg and Sherman (1984) develop a model of the optimal financial aid policy for a selective university which is seeking, subject to a total subsidy constraint, to maximize the quality of its student body. While their theoretical results suggest conditions under which more generous financial aid packages should be offered to lower income students, their empirical results are ambiguous concerning the presence of such conditions at a particular selective university.[3]

Whatever the specific rationale for such policies, differential pricing through need-based financial aid is the common practice of U.S. private colleges. A stylized account of a typical private college's awarding of financial aid is helpful in setting the stage for a first simulation which illustrates the nature of the cost sharing which results from college-funded grants. While, in actual practice, there are many variations from the described pattern, the purpose here is to capture the essence of a private college's awarding of need-based financial aid to a typical student. Envision a college with a specified annual comprehensive expense. Assume that the college's financial aid policy is to calculate the expected family contribution for each student, there also being some specified minimum required expected family contribution. The college designates the difference between the annual comprehensive expense and expected family contribution as the amount of the student's need. The college then meets a specified percentage of the calculated need through a financial aid package. The first portion of the package is the amount of student grants funded by external groups, including state and federal government; the second portion is self-help loans and student term-time work; and the remaining part of the financial aid package is a college-funded grant to the student.

Specifically, let:

COMP = annual comprehensive expense

EFC_i = expected family contribution of student i

MINFC = minimum expected family contribution of student

$EXGR_i$ = amount of externally-funded grant to student i

SH_i = amount of self-help loans and term-time work by student i

PCT= percentage of need met through grants and self-help

P_i = actual net price to student i

The net price for students will depend upon their expected family contribution. I.e., subject to $P_i \leq COMP$:

$$\text{if } EFC_i \leq MINFC, \text{ then } P_i = MINFC + EXGR_i + SH_i + (1-PCT)*(COMP-MINFC);$$

$$\text{if } MINFC < EFC_i, \text{ then } P_i = EFC_i + EXGR_i + SH_i + (1-PCT)*(COMP-EFC_i).$$

For any given student, the difference between the average student payment and the actual net price, P_i, to the student may be viewed as the amount of the student's cost sharing attributable to college-funded grants.[4]

A first simulation illustrates the cost sharing which arises from the awarding of financial aid, as depicted in the above stylized account. In the simulation, it is assumed that the distribution of students' expected family contribution at a particular college follows a normal distribution, subject to a specified minimum. Information is provided on the mean and standard deviation of the particular normal distribution. The extent of cost sharing also depends on several other factors, and information is provided on these factors: the number of students; the comprehensive expense of the college; the system of external grant awards; and the minimum expected family contribution, the percentage of need met, and the maximum required self-help established as part of the college's financial aid policy.[5]

For example, assume the following conditions for a particular college with 1,000 students:

Comprehensive expense: $10,000

Distribution of students' expected family contribution is assumed normal with a mean of $12,000 and a standard deviation of $10,000, subject to a minimum expected family contribution of $1,000

Percentage of need met: 100 percent

External grant award: $2,000 for student with an expected family contribution=$0; thereafter, reduced 40 cents for every extra dollar of expected family contribution [6]

Maximum self-help required: $2,000

Given this information, the results of the simulation follow, as shown in Table 1.[7]

With the major focus of the analysis on cost sharing among current students' families, students are grouped in

Table 1

Results of a First Simulation Illustrating the Nature of Cost Sharing Among Current Students

Conditions

Comprehensive expense = $10,000
Distribution of students' expected family contribution is normal with a mean = $12,000 and a standard deviation = $10,000, subject to a minimum expected family contribution of $1,000
External grant award is $2,000 for student with EFC=$0; thereafter, reduced by 40 cents for every extra dollar of EFC
Percentage of need met = 100%
Maximum required self-help = $2,000
Number of students = 1,000

Results

Comprehensive expense = $10,000
Average institutional grant = $1,329 (i.e., total inst. grant is $1,329,480)
Average student payment = $8,671 (i.e., total student payment is $8,670,520)
Cost-sharing dividing line = $6,671
29.7% of students are below this dividing line and make 19.3% of the total student payment
70.3% of students are above this dividing line and make 80.7% of the total student payment
$901,000 of costs are shifted from one group to the other

(1) Expected Family Contribution	(2) Cumulative % of Total Number of Students	(3) Cumulative Actual % of Total Student Payment	(4) Actual Net Price	(5) Overall Average Student Payment	(6) Actual Total Student Payment	(7) Total Payment Based on Overall Average Student Payment	(8) Amount of Change from (7) to (6)	(9) (8) as a Percentage of (7)
≤ $1999	15.9%	8.5%	$4640	$8671	$736141	$1375622	$-639481	-46.5%
2000- 3999	21.2	12.0	5788	8671	307918	461272	-153354	-33.2
4000- 5999	27.4	17.1	7078	8671	441664	541020	-99357	-18.4
6000- 7999	34.5	24.4	8967	8671	630577	609755	20823	3.4
8000- 9999	42.1	33.2	10000	8671	761620	660364	101257	15.3
10000-11999	50.0	42.3	10000	8671	792597	687222	105375	15.3
12000-13999	57.9	51.5	10000	8671	792597	687222	105375	15.3
14000-15999	65.5	60.3	10000	8671	761620	660364	101257	15.3
16000-17999	72.6	68.4	10000	8671	703251	609755	93497	15.3
18000-19999	78.8	75.6	10000	8671	623977	541020	82957	15.3
20000-21999	84.1	81.7	10000	8671	532001	461272	70729	15.3
≥ 22000	100.0	100.0	10000	8671	1586553	1375622	210931	15.3

the bottom part of Table 1 by expected family contribution. For each group of students, the results show: the cumulative percentage of students; the cumulative percentage of total student payment actually made; the actual net price; the overall average student payment; the total payment actually collected from students; the total student payment which would have been collected if each student continued to attend and paid the average student payment; the difference in the amount of total payment actually collected versus the total if each student were assessed an actual net price equal to the average student payment; and this difference as a percentage of the total if each student were assessed the average student payment.

The simulation illustrates several key points about the nature of cost sharing among current students:

o The average institutionally-funded grant per student accounts for the difference between the stated comprehensive expense and the average student payment.[8] In this case, the average grant of $1,329 constitutes the difference between the comprehensive expense of $10,000 and the average student payment of $8,671. Under the cited financial aid system, the college, with 1,000 students, will collect $8.67 million from students, the residual of $1.33 million being paid by institutional grants.

o In setting its comprehensive expense, the college is establishing the maximum amount paid by a student, not the actual amount paid. With the provision of grant aid to needy students, the college effectively establishes a set of different prices for its students. It is this pattern of different prices which accounts for the cost sharing which occurs. For students with expected family contribution below $8,000, the amount paid equals the student's expected family contribution (subject to a minimum of $1,000) plus external grant plus required self-help of $2,000.[9] For students with expected family contribution at or above $8,000, the amount paid is the comprehensive expense of $10,000.

At one extreme, the minimum payment (by students with an expected family contribution of $1,000) of $4,600 is 47 percent less than the $8,671 average student payment. At the other extreme, the maximum payment of $10,000 is 15 percent higher than the $8,671.

- The shift in costs occurs between two groups. For one group of students, the sum of expected family contribution (subject to some specified minimum), external grant, and required self-help is less than the average student payment; costs are shifted away from this first group. For a second group of students, the sum of expected family contribution and required self-help exceeds the average student payment; costs are shifted on to this second group.

Given the required self-help of $2,000, those students with an expected family contribution less than $6,671 actually pay less than the average student payment of $8,671; these students have costs shifted away from them. The costs are shifted on to a second group, whose expected family contribution exceeds $6,671. The first group, constituting 30% of the students, pays 19% of the $8.67 million total payment collected by the college from students while the second group, constituting 70% of students, is paying 81% of this total.[10] Approximately $0.90 million of costs are shifted from the first group to the second group.

Further, of the $8.67 million paid by students, $0.30 million consists of externally-funded grants. Of the $8.37 million paid by students and not externally funded, $1.38 million is paid by the 30% group. I.e., the 30% group accounts for 16% of the non-externally-funded student payment while the 70% group accounts for 84% of the payment.

3. The Extent of Cost Sharing at A Group of Highly Selective Private New England Colleges

In this section, the cost-sharing perspective is applied to a group of New England private colleges. Specifically, the focus is on a group of eleven colleges whose "admissions competitiveness" has been rated as "most competitive" in Barron's *Profiles of American Colleges* (1986).[11] The annual comprehensive expenses of these colleges are also among the highest in the United States. Other evidence suggests, however, that these colleges offer substantial amounts of need-based financial aid, suggesting that the high comprehensive expenses may be part of a cost-sharing approach that seeks to shift expenses away from needy students and on to students who can better afford such expenses. The present section first identifies a composite college based on average figures for these eleven colleges and then provides an empirical perspective on the extent of cost sharing at the composite college due to college-funded grants.

The estimate made is for the academic year 1985-86 and is for freshmen. For these eleven colleges, the average comprehensive expense was $15,754, the average number of freshmen was 916, an average of 43% of the freshmen were judged needy, the average institutional grant was $2,018, the average externally-funded grant was $675, and the average amount of self-help was $1,256. Using estimates of maximum required self-help, of the average minimum expected family contribution (derived from assumed summer earnings of the student), and of the relationship of externally-funded grants to expected family contribution, a further estimate can be made of the distribution of students' expected family contribution which would have generated the average grant and percentage judged needy results. Assuming a normal distribution, the estimate for the most competitive colleges is that the freshmen expected family contribution distribution had a mean of $18,500 and a standard deviation of $15,500.[12]

Key aspects of the results for the composite college include the following:

o While the comprehensive expense is $15,754, the average student payment is $13,736 with a total payment of $12.58 million made by the 916 students.[13]

o Given the required self-help of $3,200, the cost-sharing dividing line among students is $10,536. Students with an expected family contribution below the dividing line-- constituting 30% of the students-- have costs shifted away from them; this 30% group actually pays only 21% of the total payment made by students. Those students with an expected family contribution above the dividing line, constituting 70% of the students, make 79% of the total student payment.

o While the 30% group pays $2.61 million, this payment is $1.21 million lower than the $3.82 million which would represent this group's proportional share of the total student payment. This $1.21 million is shifted on to the 70% group, which actually pays $9.97 million instead of its $8.76 million proportional share.

o Of the $12.58 million paid by students, $0.62 million is in the form of externally-funded grants. Of the $11.96 million paid by students and not externally funded, $2.00 million is paid by the 30% group and $9.97 million is paid by the 70% group. I.e., the 30% group accounts for 17% of the non-externally-funded student payment while the 70% group accounts for 83% of the payment.

The general point is that some portion of the colleges' comprehensive fees is simply a vehicle through which one group of students pays a higher fee than the amounts which the colleges are seeking to collect, on average, from students. The result, in the case of these eleven colleges, is a substantial amount of cost sharing among students-- on the order of magnitude of an average of $1.2 million per freshman class.

4. A Cost-Sharing Perspective on the Impact of Sharp Increases in Comprehensive Expenses and Lagging Increases in Government Aid

The cost-sharing framework also provides an interesting perspective from which to view recent trends in college costs and student financial aid. During the 1980s, private colleges have generally raised their comprehensive fees at rates exceeding increases in median family income and disposable personal income per capita. Further, the amount of federally-funded grants to students has risen more slowly than the rate of increase in colleges' comprehensive fees (Lewis, 1988). What are the consequences for individual private colleges of such rapid increases in comprehensive fees coupled with cutbacks in the growth of federally-funded aid? How does the extent of cost sharing change? What is the impact on actual student costs and student financial aid?

McPherson (1988), interested in exploring the relationship between changes in federal aid and colleges' aid to students, has noted that as federal aid diminished in real terms during the 1980s, institutional aid increases have accelerated. McPherson notes that a primary way in which a rapid rate of increase in institutional student aid is financed is through more rapid tuition increases borne by non-aided students and their families. He further suggests (p. 82):

> When federal aid resources are rising, tuition increases may slow, because the cost of expanded aid is picked up by the national government. But when they are low or falling-- as in the late 1960s (low) and the 1980s (falling)-- tuitions may have to rise to finance increased aid from institutional revenues.

Following the McPherson insight, a simulation can illustrate the potential impact at an individual private college of sharp increases in comprehensive fees in the face of lagging governmentally-funded student aid.

Building upon the simulation of Section 2, consider the following illustration-- from a cost-sharing perspective-- of the implications for an individual college of a comprehensive expense increase. The college of Section 2 was assessing a comprehensive expense of $10,000 and was confronted with a student group whose expected family contribution was normally distributed with a mean of $12,000 and a standard deviation of $10,000. Suppose that this college were to raise its comprehensive expense by 10 percent from $10,000 to $11,000. Corresponding to this 10 percent increase, suppose that the maximum required self-help also increases by 10 percent. Further assume, however, that the students' expected family contribution was increasing by only 5 percent, so that the mean was now $12,600 with a standard deviation of $10,500. Corresponding to this 5 percent increase in expected family contribution, suppose that the minimum expected family contribution increases by 5 percent. Also, as governmental aid fails to keep pace, assume that the maximum external grant increases by only 3 percent. Finally, assume that the college continues to enroll 1,000 students. Table 2 indicates some of the changes which would occur as the college raises its comprehensive expense from $10,000 to $11,000 under these circumstances. Clearly, this is meant to be just an illustration; as noted below, substantial empirical research is needed before one can begin to have hoped to have set the simulation's parameters at realistic levels.[14]

A first major set of points concerns the distributional consequences of the cited changes: a higher percentage of students is now below the cost-sharing dividing line; and there is an increased amount of cost sharing, both on an *absolute* basis and a *relative* basis.

- While the comprehensive expense increases from $10,000 to $11,000, the average institutional grant also increases from $1,329 to $1,547. Thus, the average student payment increases from $8,671 to $9,453. Further, the cost-sharing dividing line increases from $6,671 to $7,253 with the percentage of students below the dividing line increasing from 29.7 percent to 30.5 percent.

- In the terms of the present paper, the amount of absolute cost sharing is measured by the dollar amount of costs shifted from those paying below the average student payment to those paying above the average student payment. On an absolute basis, the dollar amount of cost sharing increases by $0.13 million from $0.90 million to $1.03 million.

- On a relative basis, there is also an increased amount of cost sharing. Any cumulative percentage of

Table 2
A First Simulation Comparing Cost Sharing Before and After A Change in Comprehensive Expense

Conditions	Initial	Subsequent	% Change
Comprehensive Expense	$10,000	$11,000	10.0%
Maximum Required Self-Help	2,000	2,200	10.0
Mean Expected Family Contrib.	12,000	12,600	5.0
Std. Dev. Expected Fam. Contr.	10,000	10,500	5.0
Minimum Expected Fam. Contr.	1,000	1,050	5.0
Maximum External Grant(at EFC=$0)	2,000	2,060	3.0
Reduction in External Grant as EFC Increases	0.4	0.4	0.0
Percentage of Need Met	100%	100%	0.0
Number of Students	1,000	1,000	0.0
Results			
Comprehensive Expense	$10,000	$11,000	10.0%
Average Institutional Grant	1,329	1,547	16.4
Average Student Payment	8,671	9,453	9.0
Cost-Sharing EFC Dividing Line	6,671	7,253	8.7
% of Students Below Dividing Line	29.7%	30.5%	--
Absolute Amount of Cost Sharing	$901,000	$1,031,000	14.4
Total Ability To Pay	$7,602,980	$8,267,900	8.7%
Total Need (and Total Aid)	2,397,020	2,732,100	14.0
Total Student Payment	8,670,520	9,453,450	9.0
Total External Grant	299,170	304,350	1.7
Total Self Help	768,370	881,210	14.7
Total Institutional Grant	1,329,480	1,546,550	16.3

(Note: As a percentage of total aid, external grants decrease from 12.5% to 11.1%, self-help increases from 32.1% to 32.3%, and institutional grants increase from 55.5 to 56.6%.)

		Initial $10,000 Comp. Exp.		Subsequent $11,000 Comp. Exp.		Change				
Initial Expected Family Contribution	Cumulative % of Total Students	Cumulative % of Total Student Payment	Over (+) or Under (-) Payment	Cumulative % of Total Student Payment	Over (+) or Under (-) Payment	Cumulative % of Total Student Payment	Over (+) or Under (-) Payment	% of Total Students	% of Total Student Payment with $10,000 Comp. Exp.	% Paid of Change in Total Student Payment as Comp. Exp. Changes
		(All dollar figures are in thousands)								
<$2	15.9%	8.5%	-$639.5	8.3%	-$717.3	-0.2%	-$77.8	15.9%	8.5%	5.9%
2- 4	21.2	12.0	-153.4	11.7	-176.3	-0.3	-23.0	5.3	3.6	2.4
4- 6	27.4	17.1	-99.4	16.7	-121.1	-0.4	-21.6	6.2	5.1	3.5
6- 8	34.5	24.4	+20.8	23.8	+4.5	-0.6	-16.3	7.0	7.3	4.9
8-10	42.1	33.2	+101.3	32.6	+114.3	-0.6	+13.0	7.6	8.8	9.3
10-12	50.0	42.3	+105.4	41.8	+122.6	-0.5	+17.2	7.9	9.1	10.1
12-14	57.9	51.5	+105.4	51.0	+122.6	-0.4	+17.2	7.9	9.1	10.1
14-16	65.5	60.3	+101.3	59.9	+117.8	-0.4	+16.5	7.6	8.8	9.7
16-18	72.6	68.4	+93.5	68.1	+108.8	-0.3	+15.3	7.0	8.1	9.0
18-20	78.8	75.6	+83.0	75.3	+96.5	-0.2	+13.5	6.2	7.2	8.0
20-22	84.1	81.7	+70.7	81.5	+82.3	-0.2	+11.5	5.3	6.1	6.8
> 22	100.0	100.0	+210.9	100.0	+245.4	0.0	+34.4	15.9	18.3	20.3

students with an expected family contribution below a specified level accounts for a smaller percentage of the total student payment after the increase in the comprehensive expense. For example, the lowest 50.0 percent of students (lowest in terms of expected family contribution) account for 42.3 percent of the total student payment under the initial conditions versus 41.8 percent after the increase in comprehensive expense.

The reason there is increased relative cost sharing after the expense increase is because students with low expected family contribution are increasing the amount of their student payment by a lower percentage than the percentage increase of higher expected family contribution students. The last three columns of Table 2 reflect this point. The next-to-last column shows the percentage of the total student payment originally made by the specified expected family contribution group. In order for the extent of relative cost sharing not to change, each expected family contribution group's share of added total student payment would have to be the same as its share before the comprehensive expense increase. Instead, the groups with lower expected family contribution (up to $8,355 under the original conditions) pay a disproportionately small share of the added student payment. Thus, the amount of relative cost sharing is higher after the increase in the comprehensive expense.

A second set of points concerns the extent to which calculated student need would increase and the extent to which the increased need would be met by increases in externally-funded grants, required self-help, and institutionally-funded grants.

- Total need increases by 14.0 percent from $2.40 to $2.73 million. With comprehensive expenses increasing more rapidly than the increase in expected family contribution, somewhat more students (439 versus 421) now have need and, of those previously with need, the amount increases by more than the 10.0 percent.

I.e., while the stated comprehensive expenses are increasing in total by 10.0 percent from $10.00 to $11.00 million, students' calculated ability to pay-- based on their expected family contribution up to a maximum of the comprehensive expense-- is increasing by only 8.7 percent from $7.60 million to $8.27 million. Assuming just for the moment that each student holds his or her initial position in the expected family contribution distribution, the 8.7 percent overall increase is composed of a 5.0 percent increase for those students who were judged needy before the expense increase (and who would still be needy), a 5.0-10.0 percent increase for those students who formerly were not needy but now are, and a 10.0 percent increase for those students who continue to be not needy.

With total need having increased sharply, how do the components of total aid change in meeting this increase in total need?:

- Given the particular external grant formula used in the simulation, external grants increase by only 1.7 percent, somewhat less than the 3.0 percent increase in the maximum external grant as slightly fewer students qualify for external aid and as the increase in amount per qualifying student falls short of 3.0 percent.[15]

o Self-help required of students increases by 14.7 percent from $0.77 to $0.88 million. Despite the fact that the maximum self-help required of any one student increases by only 10.0 percent, the sharp percentage increase among those students just qualifying as needy generates this sharp percentage increase in self-help.

o Of particular interest, institutionally-funded grants would increase by 16.3 percent from $1.33 to $1.55 million. With calculated need increasing by 14.0 percent and with external grants and required self-help together increasing by less than 14.0 percent, institutional grants are left with a disproportionate share of the increased need. Of the $0.34 million increase in calculated need, 1.5 percent is met by an increase in external grants (versus external grant's original 12.5 percent portion of need), 33.7 percent is met by an increase in self-help (versus its original share of 32.1 percent), and 64.8 percent is met by an increase in institutional grants (versus its original share of 55.5 percent).

o As a result, the share of total aid accounted for by external grants decreases from 12.5 to 11.1 percent, the share accounted for by self-help increases from 32.1 to 32.3 percent, and the share accounted for by institutional grants increases from 55.5 to 56.6 percent.

A final point is that in order to increase total student payment by a targeted percentage which is greater than the percentage increase in expected family contribution, comprehensive expenses must be raised by a higher percentage than the targeted percentage increase in total student payment. In the present case in order to achieve a targeted increase in total student payment of 9.0 percent (greater than the 5.0 percent increase in students' expected family contribution), a 10.0 percent increase in the stated comprehensive expense would be required. This result essentially is due to calculated total need increasing by 14.0 percent and institutional grants meeting a disproportionate share of the increased need.

The preceding simulation is designed to illustrate how an individual private college and its students might be affected by sharp increases in comprehensive expenses coupled with lagging increases in federal student aid. In some respects, the cited results for an individual college match up well with recent aggregate trends in private college costs and student aid (Lewis, 1988). During the 1980s, private colleges' comprehensive fees have increased more rapidly than increases in median family income. For private and public colleges and universities as a whole-- and, presumably, for private colleges alone-- external grant aid has fallen as a percentage of total student aid; and institutionally funded grant aid has risen as a percentage of total student aid and has risen more rapidly than the increases in comprehensive fees. Further, this last point suggests that the rate of increase in actual student payment to colleges has fallen short of the increase in comprehensive fees.

However, there is one major way in which the simulation results do not match the actual aggregate trends in student financial aid. In the simulation, total student aid increases more rapidly than the increase in comprehensive fees; but the actual aggregate trend is that total aid has fallen short of the increase in fees during the 1980s.[16] Why is it that the simulation results for the individual college fail to correspond to this important aspect of the overall trend? Several possible reasons exist, and each points to the need for careful empirical research to identify how the aggregate trends have emerged.

A first major possibility concerns the relationship of recent trends in family income to the distribution of students' expected family contribution at a particular college. Uniform Methodology (and, now, Congressional Methodology) has the potential of converting a given percentage increase in family income into a higher percentage increase in expected family contribution.[17] As reflected in College Scholarship Service (1980 through 1988), the marginal rates at which adjusted available income is assessed in calculating expected parental contribution are higher at higher levels of income. While the demarcations in income brackets have been increased during the 1980s as have standard maintenance allowances, the overall calculation-- including consideration of family assets-- permits a divergence in the rates at which family income and expected family contribution increase.

Thus, even as the rate of increase in median family income falls short of the rate of increase in comprehensive expenses, the increase in the distribution of students' expected family contribution may match or exceed the expense increase. Table 3 provides an example of an increase in comprehensive expenses when the distribution of students' expected family contribution is increasing more sharply than the comprehensive expense increase and when governmental aid increases are lagging. Total aid, corresponding in this case to total need, increases at a lower rate than the increase in comprehensive expenses; but, with governmental aid lagging, institutional aid increases at a higher rate than the increase in comprehensive expenses.

A related point concerns the price sensitivity of students and how a change in actual net prices to students is likely to affect students' application and attendance decisions at a particular private college. Relative to the initial distribution, is it likely that the distribution would remain the same after the increase in comprehensive expenses? Conceptually, with different students along the expected family contribution spectrum having different price sensitivities and facing different rates of increase in actual net prices, there is reason to anticipate a changing shape of the distribution-- even if the college continues to attract 1,000 students. Among many possibilities, one

Table 3
A Second Simulation Comparing Cost Sharing Before and After A Change in Comprehensive Expense

	Initial	Subsequent	% Change
Conditions			
Comprehensive Expense	$10,000	$10,800	8.0%
Maximum Required Self-Help	2,000	2,160	8.0
Mean Expected Family Contrib.	12,000	13,200	10.0
Std. Dev. Expected Fam. Contr.	10,000	11,000	10.0
Minimum Expected Fam. Contr.	1,000	1,100	10.0
Maximum External Grant(at EFC=$0)	2,000	2,040	2.0
Reduction in External Grant as EFC Increases	0.4	0.4	0.0
Percentage of Need Met	100%	100%	0.0
Number of Students	1,000	1,000	0.0
Results			
Comprehensive Expense	$10,000	$10,800	8.0%
Average Institutional Grant	1,329	1,445	8.7
Average Student Payment	8,671	9,355	7.9
Cost-Sharing EFC Dividing Line	6,671	7,195	7.9
% of Students Below Dividing Line	29.7%	29.3%	--
Absolute Amount of Cost Sharing	$901,000	$986,000	9.4
Total Ability To Pay	$7,602,980	$8,267,900	8.7%
Total Need (and Total Aid)	2,397,020	2,551,500	6.4
Total Student Payment	8,670,520	9,355,300	7.9
Total External Grant	299,170	290,830	-2.8
Total Self Help	768,370	815,960	6.2
Total Institutional Grant	1,329,480	1,444,700	8.7

(Note: As a percentage of total aid, external grants decrease from 12.5% to 11.4%, self-help decreases from 32.1% to 32.0%, and institutional grants increase from 55.5% to 56.6%.)

		Initial $10,000 Comp. Exp.		Subsequent $10,800 Comp. Exp.		Change				
Initial Expected Family Contribution	Cumulative % of Total Students	Cumulative % of Total Student Payment	Over (+) or Under (-) Payment	Cumulative % of Total Student Payment	Over (+) or Under (-) Payment	Cumulative % of Total Student Payment	Over (+) or Under (-) Payment	% of Total Students	% of Total Student Payment with $10,000 Comp. Exp.	% Paid of Change in Total Student Payment as Comp. Exp. Changes
		(All dollar figures are in thousands)								
<$2	15.9%	8.5%	-$639.5	8.4%	-$706.2	-0.1%	-$66.7	15.9%	8.5%	6.1%
2- 4	21.2	12.0	-153.3	11.8	-169.5	-0.2	-16.1	5.3	3.6	3.0
4- 6	27.4	17.1	-99.4	17.0	-104.3	-0.2	-4.9	6.2	5.1	5.5
6- 8	34.5	24.4	+20.8	24.3	+33.1	-0.1	+12.2	7.0	7.3	8.8
8-10	42.1	33.2	+101.3	33.1	+110.0	-0.1	+8.8	7.6	8.8	8.9
10-12	50.0	42.3	+105.4	42.3	+114.5	-0.1	+9.1	7.9	9.1	9.3
12-14	57.9	51.5	+105.4	51.4	+114.5	0.0	+9.1	7.9	9.1	9.3
14-16	65.5	60.3	+101.3	60.2	+110.0	0.0	+8.8	7.6	8.8	8.9
16-18	72.6	68.4	+93.5	68.3	+101.6	0.0	+8.1	7.0	8.1	8.2
18-20	78.8	75.6	+83.0	75.5	+90.1	0.0	+7.2	6.2	7.2	7.3
20-22	84.1	81.7	+70.7	81.7	+76.9	0.0	+6.1	5.3	6.1	6.2
> 22	100.0	100.0	+210.9	100.0	+229.2	0.0	+18.3	15.9	18.3	18.5

possibility is that students just above the cutoff for financial aid-- families barely able to afford the college cost and faced with the full increase in comprehensive fees-- would demonstrate the greatest reaction to the increase in expenses, leaving a distribution of students' expected family contribution which sagged in the middle range relative to the initial distribution.

A third point concerning how the simulations might be appropriately modified to reflect more accurately actual trends focuses on the financial aid methodology and packaging used by the college. The simulation assumes a fixed college financial aid approach, adjusted only by specified increases in maximum required self-help and in minimum expected family contribution. However, were the situation as described-- with institutional grants increasing at a higher rate than the increase in comprehensive fees-- it is plausible that the college would modify its system of awarding financial aid. For example, were non-aided students to display significant price sensitivity, the college might have substantial reason to moderate the cost-sharing approach used.[18] McPherson (1988) has emphasized that it would be inappropriate to assume that colleges' tuition and financial aid policies are unresponsive to changes in federal (and state) student aid. The simulations make virtually the opposite-- and, perhaps, equally incorrect-- presumption that colleges are, in a sense, "fully responsive" and continue to fill a given percentage (perhaps 100 percent) of student need.[19]

Finally, it is important to emphasize that however helpful it may be to provide an illustration of the relationship of increases in comprehensive expense, distribution of students' expected family contribution, and student financial aid at a particular college, substantial differences exist among private colleges. McPherson, Schapiro, and Winston (1989) have emphasized that there have been significant differences among colleges in their rates of increase in gross tuition, student aid, and tuition net of aid with these differences apparently correlated with differences in levels of endowment. Any explanation of the aggregate trends should acknowledge these differences among colleges. For example, it may be that the example of Table 2 is representative of one group of colleges while the example of Table 3 illustrates the essence of what is happening at another group. The overall trend would then be best viewed as an aggregation of somewhat disparate tendencies at different groups of colleges; and shifts in students among different groups of colleges would also properly be acknowledged as holding part of the explanation of the aggregate trends.

In sum, then, the cost-sharing framework-- i.e., a framework which fully recognizes the distributional consequences of changes in comprehensive expenses and student financial aid-- provides an important perspective from which to view recent trends in college costs and aid. Simulations are useful in illustrating the potential results of sharp increases in comprehensive expenses and lagging increases in governmentally-funded aid. However, simulations can go only so far. Ultimately, careful empirical work will be needed to explain recent results for individual colleges and recent aggregate trends. Among the major questions which must be answered are: How have recent changes in median family income translated into changes in students' expected family contribution? How has the distribution of students' expected family contribution changed at individual colleges in response to changes in actual net prices? How have colleges changed their financial aid methodology and packaging? How do recent aggregate trends reflect disparate tendencies among different groups of colleges?

Conclusion

Cost sharing at private colleges is of central importance in understanding key aspects of college finance, both from institutional and student perspectives. The cost-sharing perspective, with its recognition of distributional considerations, may also prove helpful in understanding recent trends in college costs and student financial aid. Further, cost sharing is apt to play a critical role in changes in college finance and costs in the coming years.

Indeed, whatever the specifics of the explanation of recent trends, broad questions remain for the future. Hartle (1986) has suggested that selective private colleges have been able to raise their prices at rates substantially higher than increases in median family income (or disposable personal income per capita) because of the price insensitivity of students and their families. Hartle further notes that, eventually, price sensitivity is apt to be of increased significance, causing colleges to restrain the rate of their price increases.

An interesting issue concerns the consequences of such increased pricing restraint. If, in fact, private colleges are currently operating with a reasonable degree of efficiency, one casualty may be the quality of the educational experience offered to students. More to the point of the present paper, another casualty may be the access to selective private colleges of low- and middle-income students-- access presently facilitated by the need-based, cost-sharing system of institutional aid.

FOOTNOTES

[1] In addition to the Johnstone study, the issue of cost sharing among current students has been a background issue in much of the literature on student financial aid. In particularly explicit fashion, the notion of cost sharing has been addressed as part of the growing literature on cost-based differentials in tuition. In the absence of such cost-based differentials (i.e., under a system in which all students are charged the same tuition or under a system in which differentials inadequately reflect the extent of differences in costs), costs are shifted from those students enrolled in relatively high cost programs onto those students enrolled in relatively low cost programs. For a full discussion, see Hoenack (1982), Hoenack and Berg (1987), and Hoenack and Weiler (1975). The present paper ignores differences in program costs among students.

The present paper focuses on cost sharing among current students with no distinction being made between students and their families. Johnstone has emphasized that there also exists what some might cite as cost sharing between present students, as a group, and other individuals and organizations. These "outsiders," which provide funds which help to meet the costs of the college and thereby relieve present students of some costs, include alumni and other philanthropic contributors to the college, as well as general taxpayers who provide government funds either directly to the college or indirectly to the college through funds provided to students.

[2] The focus of the present paper is on college-funded grants as a means of providing a discount from the stated price. Loans offered at below-market rates provide another means through which some colleges provide a discount to some students, but lack of data has inhibited an assessment in the present paper of the nature and extent of such subsidized loans. Other forms of aid do not, in a direct way, involve cost sharing among current students' families.

[3] The ambiguity of Ehrenberg and Sherman's empirical results arises from the estimated relative price insensitivity of low income students. However, Ehrenberg and Sherman also suggest (p. 224) that "...it is the university's relatively generous financial aid policies for these [low-income] students that in fact leads to their less elastic yield curve."

[4] In this perspective, externally-funded grants and self-help loans and term-time work are viewed as being parts of the student's payment to the college.

[5] For a complete description of the simulation methodology used, see Basch (1987).

[6] Under the given assumption, which is intended to capture the essence of how the bulk of external grants is provided, the amount of external grant is invariant to the level of comprehensive expense for colleges with high comprehensive expenses. Such invariance is clearly present for federal Pell Grant awards and is presumed to be present for state awards as well.

[7] The assumption that the distribution of expected

family contribution is normal (subject to a specified minimum) is made to facilitate computation of the simulation results. As a more general point, whatever the distribution of students' expected family contribution is under the cost-sharing system, the distribution is likely to have been different if cost sharing were not present to facilitate access and choice. Further, there is no presumption that the college is necessarily optimizing in its choice of policies, though one could presume that the policies are designed to help achieve some set of institutional goals. The results should be read simply as indicating the nature and extent to which cost sharing occurs under the stated assumptions.

[8] Note that in the simulation, no distinction is drawn between what are sometimes referred to as "comprehensive fees" (tuition, mandatory fees, room, board) and "comprehensive expenses" (comprehensive fees plus other typical expenses incurred by the student but not paid to the college, such as transportation expenses). This simplifying assumption could be easily modified if the increased complexity were warranted by the illustration.

[9] Note that, under the given assumptions, no external grant is provided to a student with an expected family contribution of $5,000 or above.

[10] The specific percentages for the $6,671 threshold are not apparent from the table but were calculated by the author from the original simulation data summarized in the table.

[11] The eleven "most competitive" colleges are: Amherst College, Bowdoin College, Brown University, Dartmouth College, Harvard University, Massachusetts Institute of Technology, Tufts University, Wellesley College, Wesleyan College, Williams College, and Yale University.

[12] Refer to Basch (1987) for the derivation (primarily from Lehman, 1986 and College Scholarship Service, 1985) of the averages cited in this paragraph and of these estimates of the mean and standard deviation of the distribution of freshmen expected family contribution.

[13] In contrast to the average comprehensive expense (see footnote 8), the average comprehensive fee is $14,462. Thus, the average student payment collected by the college is $12,444 with a total payment of $11.40 million collected by the college from the 916 students.

[14] Further, given the substantial diversity among private colleges, it may be misleading to imply, even slightly, that a single illustration can possibly be representative of private colleges as a whole. See the discussion below and the reference to McPherson, Schapiro, and Winston (1989).

[15] For example, consider a student whose expected family contribution was formerly $2,000 and is now 5 percent higher at $2,100. This student formerly received a $1,200 external grant and now receives a $1,220 external grant, which constitutes only a 1.7 percent increase.

[16] It should be emphasized that the actual aggregate trend for student financial aid is for private and public colleges together. Data for private colleges alone is not available. I thank Gwendolyn Lewis for this point.

[17] I thank Lutz Berkner for bringing this general point to my attention.

[18] Among the many possible changes in college financial aid policy are changes in the fraction of calculated need which is met with the financial aid package and changes in the self-help/college-funded grant composition of the non-external grant part of the package.

[19] In addition to the areas mentioned, empirical research might also focus on the relationship between expected family contribution and externally-funded aid; substantial variation exists among states so that it may be difficult to generalize.

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A POLICY ANALYSIS STUDY OF TUITION PRICING AT THE STATE UNIVERSITY OF NEW YORK

Presented by

Arlene Olinsky

at the

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EXECUTIVE SUMMARY

The budget shortfall announced by New York State in 1988 led to speculation about a tuition increase at the State University of New York. At the same time, concerns about educational access for low-income students were voiced.

This study examines, on a micro level, the economic implications of a tuition increase for full-time undergraduates at the State University. It also provides a qualitative analysis, at the macro level, of the effect of tuition pricing on: 1) access for low-income students, including the roles of student aid and full information; and 2) sector choice.

The net cost of education represents the out-of-pocket expenses for the student and family. It is calculated as the difference between total costs (tuition, fees, room and board, books, and transportation) and any aid received through the New York State Tuition Assistance Program (TAP) or federal Pell grant program.

The analysis indicated that most full-time undergraduates with family adjusted gross incomes up to $29,000 will have a tuition increase fully covered by an increase in their TAP award. An exception is the single independent student who has no dependents. That category of students will have full TAP reimbursement up to $11,000 in adjusted gross income. However, these students tend to have lower earnings and 83 percent of them are in that category ($11,000 or less).

Students in the $29,000-$31,000 family income range will have approximately three-quarters of their tuition increase covered by TAP. Students above that income level will pay the full tuition increase. However, students with family incomes up to $53,000 ($62,000 in 1990-91) receive TAP awards and therefore already pay a reduced price.

Also considered was SUNY's tuition, which has remained at $1,350 since 1983, and is lower than the national average of $1,566. It is considerably lower than that of other states with comparable state university systems. Furthermore, no other state provides as much in student need-based aid as New York, where over $400 million in state aid is provided.

These findings led us to conclude that a moderate tuition increase at the State University would not diminish access for low-income students if, and only if, students have full information about and apply for TAP.

The net revenues from a $125 tuition increase, after accounting for increased TAP expenditures, were estimated at $13.2 million, $10.5 million from the four-year colleges and $2.7 million from the community colleges (based on a community college tuition increase equal to one-third the increase at the senior colleges). Higher tuition increases would produce proportionately more revenue.

A final consideration was the impact of a SUNY tuition increase on migration patterns between the public and private sectors. As the intersector cost differential decreases, higher income students who must pay the full increase may have some shift toward the private sector. Conversely, a decreased cost differential may be perceived by some as an indication of more or better services provided by SUNY, bringing in additional enrollments.

A net quantitative result of these possible migrations has not been estimated. However, they are ideas that come under consideration in pricing determinations.

INTRODUCTION

Impetus for the Study

Last year, Governor Mario M. Cuomo announced that New York State was facing a huge budget shortfall. As a result, state agencies were advised that they should prepare themselves for an austerity budget. The cutbacks would affect the State University of New York (SUNY) system as well. A shortfall of $47 million[1] was projected for SUNY, based on Governor Cuomo's proposed budget.

A tuition increase to offset some of the projected revenue loss is considered likely. At the time of this writing, a $200 tuition increase has been approved by the New York State Legislature in the SFY '90 budget. However, it has not yet been approved by Governor Cuomo after which it must be voted on by the SUNY Board of Trustees.

This study examines the impact of tuition pricing at the State University on students. It explores a number of pricing levels and provides an analysis of who is affected and how they are affected.

Background

Public university systems in the United States traditionally have been looked upon as the bastions of low and middle-income families. The public sector provided educational opportunity for those who could not afford the higher private sector costs; but it also was always an option for the wealthy, who if they attended, received the same subsidies (provided through public funds paid for by the taxes of all citizens) as their less affluent peers.

It is estimated that the tuition charges at the State

University of New York represent a subsidy of approximately $8,000 per year for each full-time student. The tuition charge for full-time undergraduate students who are New York State residents is currently $1,350; it has not increased since 1983.

How Much is Fair?

The question of appropriate tuition charges at public universities is a much debated issue. How much should students and families be asked to pay? How much should taxpayers be asked to pay? How will an increase in tuition of, say, $100 impact on enrollments? Who can pay and who will drop out? Is it fair that wealthy families pay the same as poor families? At the the opposite pole, the question might concern the fairness of financial aid for the poor paid for by taxes on all.

Other issues relate to the mission of the public university in providing access, the role of financial aid and the consideration of need in the admission process.

The Private Sector

The issue is even more complicated. Private sector enrollments are affected by the relation between public and private sector tuitions. If public sector tuitions rise to the point where some families (presumably those with incomes high enough to make the choice) perceive that the differential between public and private sector tuitions has become small enough to warrant a switch to what is perceived as a "more prestigious" private college, will that increase private sector enrollments at the expense of the public sector? As a consequence, will public sector enrollments decline, or will State University schools become less selective, filling those slots with less capable students? In either case, the

University experiences an economic loss, since students who are academically and/or financially deficient create a greater workload through increased need for counseling and support services.

However, the private-public price differential often causes enrollment switches in the other direction. As private sector costs escalate, there is a tendency for middle and even upper-income students to migrate to the public sector. This migration could have a "snowballing" effect, as the public university comes to be viewed as more prestigious when sons and daughters of affluent families attend in greater proportions. While this tends to benefit the public university in an economic sense, it tends to have a "push down - squeeze out" effect in which low-income and minority students are squeezed out. Clearly, there is a point at which quality and equality come into equilibrium.

The Role of Student Aid

Financial aid plays a key role in the ability of lower income students to attend college. New York students have available to them a wide variety of state grant and scholarship programs, as well as numerous federal grant and loan programs. In 1987-88, New York State provided over $400 million in grants and scholarships to students attending its postsecondary institutions.

The New York State Tuition Assistance Program (TAP) provides need-based tuition assistance, with awards determined by tuition costs and family income. During the 1989-90 academic year, students with family net incomes up to $7,500 (approximately $17,000 adjusted gross income) who attend the

State University and receive their first award in that year will have their tuitions fully paid through TAP. Students with incomes above that level will have their awards scaled, with a minimum award of $350 at $42,500 net taxable income (approximately $53,000 gross).

Federal Pell grants also are a source of support for low-income students. Awards are based on total costs (tuition plus an indirect cost allowance) and are scaled according to a student aid index, which is a measure of parental and student income and assets, family size, and number in college, and other elements. The 1989-90 maximum Pell award is $2,300.

The Role of Information

Those who are opposed to tuition increases traditionally argue that higher costs would erode access for low-income students, who tend to be disproportionately minority. The concern is that low-income families who are unfamiliar with student aid or for whom college is a first-time experience could view higher "published" costs as a deterrent to college attendance. Often, just the threat of tuition increases via media reporting creates what is known as the "discouragement factor." However, the fact is that those students are generally "held harmless" in a State University tuition increase because they receive a commensurate increase in TAP awards.

Thus, full information and early awareness represent the real catalysts in providing access. That role will be addressed in the analysis.

DESCRIPTION OF THE STUDY

Scope of the Study

This study focuses on undergraduate tuition pricing policies at the State University of New York. More specifically, it discusses the rationale for and potential impacts of a tuition increase. Analysis is limited to full-time undergraduates, because part-time students have a different price structure and are ineligible for financial aid through New York's Tuition Assistance Program (TAP). In the event of a tuition increase, part-time students will likely face a proportional increase in their per-credit tuition charges, for which they may receive some types of financial assistance. However, because of time constraints, that issue must be reserved for further investigation.

Community college students will be excluded from specific net cost analyses because tuition prices at those schools vary (although they may not exceed tuition at the state-operated colleges), and are not required to increase concomitantly with the four-year institutions. However, TAP-eligible students at community colleges will have a tuition increase offset by an increase in TAP to the same degree as students at similar income levels who attend the senior colleges.

The State University enrolls 38 percent of New York's college students. Table 1, below, indicates SUNY enrollment data for the fall of 1987.[2] The population indicated within the boxed area are the student group represented in our analyses and subsequent discussion. Forty-three percent of them receive TAP.[3]

Table 1. SUNY Enrollments: Fall 1987

	Undergraduate		Graduate	
	Full-Time	Part-Time	Full-Time	Part-Time
Senior Colleges	121,187	41,859	16,793	19,262
Community Colleges	87,744	82,473		

Within this population, this study presents, at a micro level, an analysis of the economic implications of a tuition increase for students receiving financial aid (i.e., how does a change in tuition price affect their net cost, the amount that they and/or their family must pay?). Further, it examines the implications for students whose family incomes are above the eligibility cut-off for student aid.

Finally, this study provides a qualitative analysis, at the macro level, of the effect of tuition pricing on:

1) access for low-income students, including the roles of student aid and full information;
2) the potential migration patterns between public and private colleges, and entry/exit patterns in higher education.

Methodology

Spreadsheet and graphical analysis have been utilized to calculate the effect of varying tuition levels on net cost. For students within the eligible income range, New York State TAP and federal Pell awards are calculated, using available software packages.[4] TAP is an entitlement grant program for New York State residents attending New York State postsecondary institutions. TAP awards are based on tuition charges and the net taxable family income (See TAP schedules in Appendix A).

For low-income students attending the State University, TAP covers the full cost of tuition.

Pell awards are based on family size, income and assets, and cost of education, including a portion of indirect costs such as room and board, books and transportation. Students whose tuition is fully covered by TAP can use Pell to offset other costs. Among students who receive less than the maximum TAP award, a portion of the Pell award goes toward tuition and fees, with the remainder available to offset indirect costs.

The net cost is then the difference between students' educational budgets, as constructed in the college's financial aid office, and their TAP and Pell awards. In calculating net cost for purposes of this study, the simplifying assumption that has been made is that students receive assistance only from one or both of these programs. In reality, students, particularly those with low family incomes, are generally offered a more complex aid package which may include work and loan components. However, this simplification will not affect the relationship between tuition increases and TAP awards.

The net cost analysis requires the use of different financial aid award schedules for different family constructs. The traditional financially dependent student is assumed to come from a two-parent, four-member household. Nearly 83 percent of undergraduate TAP recipients at SUNY are traditional dependent students. In addition, awards and net cost levels will be calculated for:

(1) single financially independent students (10.5 percent of the undergraduate TAP population at SUNY)

(2) married students (4.5 percent)

(3) single parent students with a dependent child. (2.3 percent)

The quantitative results of this investigation will be presented at a micro level; that is, what types of students at what income ranges will be positively or negatively affected, and by how much?

On a macro, or systems level, I explore through discussion and causal diagrams, the effect of tuition policy on shifts in the public vs. private sectors of education and on access for students who utilize financial aid to help pay for educational costs. Such diagrams do not specify the exact quantitative relationship between elements but represent rough sketches of underlying models that may be complex.

FINDINGS

SUNY's Tuition is Low in Nationwide Comparison

In order to provide a broader perspective on public sector tuition pricing, SUNY's tuition was compared with tuition costs at state universities in a number of other states. At the same time, it is important to note that no other state has a student aid program as extensive as New York's. Our state provides 27 percent of all need-based grant dollars spent nationally each year, and nearly three times as much as the second largest state provider of aid, Illinois.

The attached Figure 1 compares average 1988-89 (except where noted) tuition levels for several state university systems. All but three of those listed have higher tuition charges than New York. Illinois, the second largest state provider of student aid,[5] charges $2,427 in tuition and fees for state residents. California charges $1,570; Pennsylvania, $3,126. In fact, the 1988-89 national average for tuition and fees at public four-year institutions was $1,566,[6] more than $200 higher than New York's $1,350.[7]

For further consideration are data which indicate that New York students have higher average parental incomes than the national average. The College Scholarship Service reports that, for students who filed the Financial Aid Form (FAF) for the 1988-89 school year, the typical dependent student in New York came from a family with an average parental adjusted gross income of $35,516, as compared with a national average of $33,436.[8]

College Board data also indicate that tuition and fees at four-year public universities nationwide have had a 6.8 percent average annual increase[9] during the five years since 1983, the last time that SUNY tuition was raised. An increase in SUNY's tuition of $125 would represent a 9.3 percent increase, considerably less than the cumulative 38.9 percent increase in the national average since 1983.

Economic Effects of a Tuition Increase on Students

Figures 2-11 depict in tabular and graphical form the effect of a tuition change on the net cost of attendance for resident and commuter students at SUNY. Commuters are students who are able to live at home with their parents. Resident students include those living in campus-owned housing, as well as those living in the community and not with parents. It is estimated that the resident/commuter split for SUNY full-time undergraduates is 80% resident - 20% commuter.

The net cost of attendance is the difference between the student budget as determined in the financial aid office and the student's TAP and Pell awards. The student budgets used to calculate net cost are as follows:

	Resident	Commuter
Tuition + $25 fee	$1,375	$1,375
Other Fees	160	160
Housing/Food	3,500	1,500
Other Expenses	1,405	1,700
	$6,440	$4,735

The impact of tuition increases was examined, holding all other costs constant.

Resident Students

For resident single dependent students with family incomes up to $29,000 in adjusted gross income, tuition could be raised by any amount from the current $1,350 to the value of the maximum TAP award, $3,650, with no change in net cost of students (See Figures 2 and 3). Married students and single student with dependents of their own would be "held harmless" up to approximately $27,000 (Figures 4-7). The different results for the former and latter groups arises from differences in net taxable income, from which TAP is calculated, i.e., identical gross incomes result in different net incomes according to family composition.

Single independent students have a separate TAP award schedule with a lower income eligibility cutoff (see TAP schedules in Appendix A). These students will have a tuition increase fully covered by TAP for adjusted gross incomes up to $11,000 (see Figures 8 and 9). While this "hold harmless" level is considerably lower than those of dependent, married or single-parent students, approximately 83 percent of all single independent undergraduates at SUNY have incomes at or below that level.[10]

Thus, an increase in SUNY tuition to, say $1,475, would not be felt by students at low and low-middle incomes (up to $29,000 for single dependent students). However, New York State would have higher costs in the TAP program to cover the $125 increase for students at these income levels.

Resident dependent students with family incomes between $29,000 and $31,000 would pay up to $90 of a $125 increase in tuition. Students with family incomes above that level

($31,000) would pay the full increase of $125.

For greater tuition increases, the income level at which the full tuition increase is paid by the student rises (a diagonal effect). For example, at a tuition level of $1,800, the full increase would be paid by families with $35,000 incomes and higher (See Figures 2 and 3).

Commuter Students

Among commuter students, Figures 10 and 11 indicate that low-income students (family incomes of $17,000 adjusted gross income or less), will actually experience a reduction in net cost because of increased Pell awards based on higher tuition charges. (This phenomenon does not occur for low-income resident students because they are already receiving maximum Pell.)[11] Commuter students with family incomes between $17,000 and $29,000 will have no change in their net cost; those with incomes between $29,000 and $31,000 will pay up to $90 more, based on a tuition increase of $125; those above $31,000 will pay the full increase. As observed for resident students, the greater the increase, the higher the income level at which full impact is felt.

Effect on State Revenues

Based on a $125 increase in tuition charges, approximately 29 percent[12] of full-time undergraduates at SUNY will have their tuition increase totally offset by an equal expenditure in TAP funds. For another 2 percent,[13] a portion of the additional tuition revenue will be offset by TAP spending. The remaining 69 percent, those currently receiving a minimum TAP award and those who are ineligible for TAP, will experience an "unreimbursed" tuition increase that will result in additional

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state revenues. Thus, a tuition increase of $125 at the four-year colleges is estimated to produce $10.5 million in additional revenues.

Community colleges, whose tuitions may not exceed that of the state-operated colleges, have traditionally raised their tuitions by about one-third the increase at the state-operated colleges during the first year, with additional increases in subsequent years. Thus, the first year of a $125 tuition increase at four-year colleges would bring in approximately $2.7 million from the community colleges.

A potential increase in per-credit charges for part-time students is not included in any of these estimates.

Impact on Access: Information is Critical

The foregoing analysis has made it clear that low-income students will not be impacted financially (in terms of net cost) by an increase in tuition at SUNY, and that even relatively large increases would be covered by state student aid from the TAP program. Furthermore, as tuition is raised to successively higher levels, the impact of each increase is felt by progressively higher income groups (a diagonal effect, as seen on the graphs).

Thus, for low-income students who are already in the SUNY system, and receiving TAP, one could reasonably conclude that access will not be impaired, provided that the state TAP and federal Pell grant programs maintain at least their current levels of awards. A TAP enrichment for 1990-91 has been enacted by the New York State legislature; it increases maximum awards and extends eligible income levels.

However, the question that was raised earlier in this study, continues to be an issue. What is the impact of a tuition increase on prospective students who have not yet entered college, whose families may not be familiar with financial aid? How are they, in particular, affected by media reports of higher costs? (Somehow, the fact that TAP compensates for tuition increases for low-income students is almost never reported in the same headlines.) In the absence of good information, some students and their families may assume that college is beyond their means.

Clearly, then, information about financial aid provides a critical link in providing access for low-income students. Just how information enhances access, and therefore enrollments, can be seen in the access model shown in Figure 12.

An arrow indicates a causal influence of one element on another. A plus sign (+) indicates that the influence is direct: as the element at the tail of the arrow increases, the element at the head of the arrow also increases (if the first element decreases, the second decreases). A minus sign (-) indicates an inverse relationship: as the first element increases, the second decreases; and as the first element decreases, the second increases. The diagrams do not specify the exact quantitative relationship between elements, nor the rate of response of one element to another.[14]

Among families for whom college is a first-time experience, there is often a large gap between their perception of their ability to pay for a college education for their children, and the actual ability to attend, as measured by net cost, or the family's out-of-pocket costs. In fact, a September 1988 Gallup Poll of young people aged 13-21 commissioned by the Council for the Advancement and Support of Education, revealed that most young people think college is even more expensive than it is.

The family's perception may be influenced by a number of factors, including their income and the presence of experienced friends or relatives who have been through the financial aid process and who can provide assistance with information and the application process, or interested school counselors.

Another very important factor is media reporting. Reporting of tuition increases, or even proposed increases, may act as a deterrent to poor students seeking access to college. Media reporting can have a positive effect if it informs about student aid in an easily understood manner, and if it reaches the appropriate audience. Too often, however, it produces a negative effect when cuts or proposed cuts in student aid are reported, or when it is confusing or incorrect. Low-income families who are heavily dependent on aid, are most vulnerable to media reporting, and most susceptible to the "discouragement factor."

Administrative complexity has an inverse effect on perceived ability to attend (and perhaps on actual ability also). The numerous applications that must be completed, the documentation with tax forms, proof of selective service registration, along with the long lines at institutional financial aid offices, often make the process seem endlessly complicated.

An information campaign that is comprehensive, easily understood, and that is presented to the prospective student and family early enough to permit financial and academic planning, enhances access. It reduces the gap between perception and reality. From a young age, students and families perceive that higher education is affordable and are more likely to prepare themselves, academically and financially, for college.

An effective information campaign can have a multiple impact on students' perceived ability to attend: directly, through the early awareness and college planning phase, and indirectly, by involving the media to assure that accurate and current information is reported.

Impact on Choice: Inter-Sector Shifts

The decision to attend a State University or a higher cost private university depends on the family's ability to pay (a composite of family income, family size, tuition costs and financial aid available) and the family's perception of the private sector-public sector cost differential.

An increase in tuition at the State University affects several of these factors. For students receiving financial aid, it has a direct relationship to the amount of aid received. It also has an inverse relationship to the sector cost differential.

As tuition is increased at SUNY, private sector costs held constant, the inter-sector cost differential is reduced. For some families, the relative attractiveness of SUNY bears a direct relationship to the private-public sector cost differential, and thus will also decrease. However, movement in the intersector cost differential may also have an inverse effect on the perceived quality of SUNY, i.e., if its cost becomes closer to the private sector's, it must be providing improved services. This perception, in turn, will increase SUNY's relative attractiveness.

The net effect of these factors, as well as income and intellectual ability levels, will determine what attendance choices are made.

Faced with a higher price at the State University, wealthy students would decrease the amount demanded. Some of those with high ability would decide, based on the lower cost differential, to move to the private sector. Some with low ability would drop out.

Low-income students will not have a net price change, as long as the SUNY tuition levels remain below the maximum TAP award amount. However, misconceptions about the impact could cause a trickle of some low-income students, particularly those of low ability. Any new legislation which increases the maximum TAP award reduces the intersector net cost differential for low-income students. At some point, the private sector could become relatively more attractive, and possible, for high ability low-income students, particularly if the private sector can bridge the cost difference further, through the use of institutional aid.

The net effect of these various migrations on the average ability level of SUNY students will have an impact on expenditures, and, in turn, on tuition prices. If the average ability level rises, there will be less need for support services, thereby reducing expenditures, and the pressure for higher prices. At the same time, high student ability levels are related to a higher perceived quality, which tends to increase other revenues, such as endowments and grants, again reducing pressure on tuition prices.

Finally, an increase in tuition tends to enhance the perceptions of the general public and of other groups that students and families are paying more of their "fair share" for their college educations. This tends to increase the generosity of these groups toward institutional fund-raising, creating a negative loop, and less pressure for tuition increases.

CONCLUSIONS

Impact on Access

The analysis indicates that access to higher education for low-income students will not be diminished by a moderate tuition increase at the State University, provided that students and potential students have full information about the TAP program and apply for it.

All full-time undergraduates at SUNY may be categorized in one of four groups:

I. Those in an income range which allows them to receive a larger-than-minimum TAP award (the minimum award is $350).

II. Those who currently receive a minimum award but would receive an increased award if tuition were raised.

III. Those in an income range for which the TAP award equals the minimum and would not change as a result of a tuition increase.

IV. Those whose incomes are above the TAP eligibility cutoff.

I. For the 1989-90 academic year, students with family adjusted gross incomes up to the $27,000-$29,000 range generally will have no additional out-of-pocket expenses for tuition levels at or below maximum TAP. Thus, there is considerable margin for increase in tuition before this group is economically impacted.

An exception is the single independent student who receives no parental support and has no dependents of his/her own. That category of students will have full TAP reimbursement of a tuition increase for adjusted gross incomes up to $11,000. This lower threshold for impact is not unreasonable, since single financially independent students who attend school full-time generally have relatively low earnings; they also are awarded according to a separate TAP schedule.

Approximately 29 percent of SUNY's full-time undergraduates receive a higher-than-minimum award and thus will have a tuition increase fully reimbursed by TAP.

II. Another 2 percent of SUNY's full-time undergraduate students will receive partial coverage of a tuition increase through TAP (approximately $90 of a $125 increase). These are students who currently receive a minimum TAP award and whose awards would be raised somewhat, although not by the full amount of the tuition increase.

These students are generally in the $29,000 to $31,000 income range.

III. Approximately 10 percent of SUNY's full-time undergraduates receive a minimum TAP award that will not increase as a result of the tuition increase (because their income levels are in the "bottom-out" zone). These students will pay the full tuition increase. It is important to note, however, that this group of students already is paying $350 less than the "published" price because they receive a TAP award. These students are generally in the $31,000 to $53,000 income range.

IV. The remainder, approximately 59 percent of SUNY's full-time undergraduates, receive no TAP, pay the full "published" price and will pay the full tuition increase. These are students with family adjusted gross income levels above $53,000.

This impact analysis hinges on the assumption of full knowledge of TAP by eligible students. Anything less than that would impair access, as was shown in the causal diagram (Figure 12), when there is a gap between perceived and actual ability to attend. Thus, we cannot recommend too strongly the importance of informational outreach and early awareness programs for students and families. Both the New York State Higher Education Services Corporation and State Education Department have developed a number of these programs.

Impact on Revenues

Additional revenues resulting from a $125 tuition increase are estimated at $13.2 million. This is the net gain after increased TAP expenditures are accounted for.

Approximately $10.5 million of that will come from the four-year colleges. Community colleges have traditionally raised their tuitions by about one-third the increase at the state-operated colleges during the first year, with additional increases in subsequent years. Thus, the first year of a $125 tuition increase at four-year colleges would bring in approximately $2.7 million from the community colleges.

Future Uncertainties

For purposes of this study, financial aid awards and net costs have been calculated using 1989-90 educational costs and TAP and Pell award schedules. How these factors will change in the future in relation to one another and to income distributions among families of college students is not entirely predictable.

Three key factors could cause changes in the relationship between "published" price and net cost: TAP, Pell, and income distribution changes resulting from income inflation ("bracket creep") and from tax reform (since TAP is based on net taxable income and tax law governs the conversion of gross to net income).

Since the inception of the TAP program in 1975, periodic enrichments have taken place; there has never been a contraction of the TAP program. The legislation passed in 1988 provided for successive enrichments in 1989 and 1990. The 1990-91 enrichment will extend eligibility to families with net incomes up to $50,500 (approximately $62,000 adjusted gross income), up from $42,500 (approximately $53,000 gross) in 1989-90. Students in the newly eligible population will receive a minimum TAP award of $350, meaning that they could sustain a tuition increase of up to that amount without experiencing an increase in net cost. Also, the threshold for a maximum TAP award will be increased from $7,500 net to $8,000 net, bringing more students into the maximum TAP and lowest net cost category.

Additional uncertainty lies within the federal Pell program. The Reagan administration repeatedly tried to reduce funding for Title IV student aid programs, attempts that were rebuffed by Congress. One cannot be certain where fiscal constraints and deficit reduction will lead the current administration, as far as funding for social programs. Furthermore, unlike TAP, Pell is not truly an entitlement program. There have been times when awards as calculated by the formulae in effect would have exceeded appropriations; at those times, a reduction schedule (usually linear reduction) was set into motion, reducing Pell awards for many students. Also, a greater number of elements go into the Pell calculation than into TAP. Thus, a change in any of those factors, or in the formula itself, could produce fluctuations in who receives Pell and the amounts received.

Finally, the net effect of income inflation and tax reform is difficult to predict. As a rule, financial aid awards are based on prior year income. Thus, tax reform provisions affecting 1989 income will impact on TAP awards in 1990-91. A family whose gross income did not change from 1988 to 1989, will have a lower 1989 net income (because of increased standard deduction).

Other Considerations

1. Part-Time Students. An increase in tuition for full-time students generally means a concurrent increase in per-credit prices for part-time students. This will bring in additional revenues which have not been estimated in this study.

As with full-time students, there is a concern about a potential decrease in access for low-income students, as a result of higher cost. New York's Aid for Part-Time Study (APTS) program provides assistance for low-income part-time students taking 6 or more credits. Awards are for up to $2,000 or tuition, whichever is less. Thus, half-time students could receive larger APTS awards which would compensate for all part of the increase.

In addition, Pell is available to part-time students, with the award prorated according to half or three-quarter time attendance.

2. Middle Income Families. A tuition increase may elicit negative response from those families at income levels too high for TAP. Following the 1990-91, TAP enrichment, these families would have incomes in excess of $62,000 to be ineligible for TAP. Their argument generally is that they support TAP through their (higher) taxes, yet their children do not benefit from TAP. To these people, one would respond that, moral imperatives aside, it is in their economic self-interest and all of society's, that we educate our poor and at-risk youth. The long-term savings will be theirs and their children's.

Finally, they need to be reminded that their children benefit from the approximate $8,000 per year subsidy that every student attending the State University receives.

NOTES

1. That figure was estimated to be as high as $72 million by SUNY's Board of Trustees, as reported in the Legislative Gazette on February 27, 1989.

2. College and University Opening Fall Enrollments, New York State, Fall 1987, New York State Education Department, Information Center on Education, Albany, New York, 1987.

3. TAP recipient numbers from the 1987-88 Annual Report of the New York State Higher Education Services Corporation, p. 22. Enrollment data from the New York State Education Department op. cit. The TAP utilization rate will likely increase in both 1989-90 and 1990-91 because of the higher eligible income levels legislated in the most recent TAP enrichment.

4. The New York State Higher Education Services Corporation has produced the Financial Aid Estimator, which calculates TAP and Pell awards and student loan eligibility for financially dependent students. TAP-CALC calculates TAP awards for other "non-traditional" student categories, such as married or single independent students. HESC-ABLE uses federally-approved need analysis formulae to determine family contribution and the Student Aid Index for Pell. All user-friendly programs are available on diskette for IBM-compatible PC's. They are provided free of charge by the New York State Higher Education Services Corporation to high schools, colleges, community organizations, and libraries.

5. Although it ranks second, Illinois provides only about one-third as much as New York in undergraduate need-based aid, $143 million vs. $408 million in 1987-88, as reported in the National Association of State Scholarship and Grant Programs (NASSGP) 29th Annual Survey.

6. As reported by the College Board and cited in the Chronicle of Higher Education, March 1, 1989, P. A25.

7. Tuition at SUNY is $1,350. However, an additional $25 required fee is also allowed under TAP. Thus, tables in this report showing net cost calculations will list $1,375 as SUNY's tuition charge.

8. College Scholarship Service, Institutional Summary Data for the Academic Year 1988-89, National Summary Data and New York Summary Data.

9. Chronicle of Higher Education, op. cit.

10. This percentage is estimated based on income distributions of students using the College Scholarship Service 1988-89 Financial Aid Form (FAF). The population selected included undergraduate applicants who applied for TAP or loans,

indicated they were independent and had no dependents, and had a SUNY school as their first college choice. While this method may produce some bias toward lower incomes (since upper income students may decide not to apply for aid, particularly need-based aid), it is intuitive that full-time students who have no parental financial support, do not have high incomes. Further, those with incomes too high for TAP are likely to try for some assistance through loans, and thus would appear on this file.

11. The reverse effect would be evident among resident students if tuition were lowered, i.e., low-income students would actually have a higher net cost because of reduced Pell awards. For example, a student with family income of $19,000 currently has a net cost of $3,175. That would rise to $3,355 if tuition were reduced to $500, and $3,595 if tuition were zero.

12. This figure is based on a TAP utilization rate of 43 percent at SUNY and the HESC TAP income distribution data which indicate that 68 percent of SUNY's undergraduate TAP recipients receive an award larger than the minimum.

13. Five percent of SUNY's TAP recipients, times the 43 percent utilization of TAP.

14. I am grateful to Donella H. Meadows for this description of causal loop models. Its source is "Food and Population: Policies for the United States," from America in an Independent World, University Press of New England, 1976.

Figure 1

1988-89 Average Tuition and Fee Levels at State Universities

California	$1,570	
Connecticut	1,386	(87-88)
Florida	1,100	(87-88)
Georgia	1,839	
Illinois (University of IL)	2,427	
Indiana (IN State University)	1,874	
Maine	1,678	
Maryland	1,895	
Massachusetts	2,048	
Michigan	2,193	(some locations 87-88)
Minnesota	2,098	
New Hampshire	2,399	
New Jersey	2,730	
New York	1,350	
North Carolina	865	
Ohio	1,975	
Oregon	1,556	(87-88)
Pennsylvania	3,126	(87-88)
Rhode Island	2,331	
South Carolina	1,400	(87-88)
Tennessee	1,272	(87-88)
Texas	870	
Vermont	3,440	
Virginia	2,926	(87-88)
Washington	1,798	
Wisconsin	1,644	
All States	$1,566	

Source: The College Cost Book 1988-89, College Entrance Examination Board, 1988.

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April 18, 1989

Figure 2

1989-90 ESTIMATED NET COST OF ATTENDANCE

RESIDENT STUDENT AT SUNY

	TUITION = $0 COST = $5,065			TUITION = $500 COST = $5,565			TUITION = $1,375 COST = $6,440			TUITION = $1,500 COST = $6,565			TUITION = $1,800 COST = $6,865			TUITION = $2,500 COST = $7,565			TUITION = $3,650 COST = $8,715		
AGI	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET
$0	$0	$1,470	$3,595	$500	$1,770	$3,295	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765	$3,650	$2,300	$2,765
$13,000	$0	$1,470	$3,595	$500	$1,770	$3,295	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765	$3,650	$2,300	$2,765
$15,000	$0	$1,470	$3,595	$500	$1,770	$3,295	$1,375	$2,250	$2,815	$1,500	$2,250	$2,815	$1,800	$2,250	$2,815	$2,500	$2,250	$2,815	$3,650	$2,250	$2,815
$17,000	$0	$1,470	$3,595	$500	$1,770	$3,295	$1,375	$2,050	$3,015	$1,500	$2,050	$3,015	$1,800	$2,050	$3,015	$2,500	$2,050	$3,015	$3,650	$2,050	$3,015
$19,000	$0	$1,470	$3,595	$440	$1,770	$3,355	$1,315	$1,950	$3,175	$1,440	$1,950	$3,175	$1,740	$1,950	$3,175	$2,440	$1,950	$3,175	$3,590	$1,950	$3,175
$21,000	$0	$1,470	$3,595	$350	$1,750	$3,465	$1,195	$1,750	$3,495	$1,320	$1,750	$3,495	$1,620	$1,750	$3,495	$2,320	$1,750	$3,495	$3,470	$1,750	$3,495
$23,000	$0	$1,470	$3,595	$350	$1,550	$3,665	$1,030	$1,550	$3,660	$1,155	$1,550	$3,660	$1,455	$1,550	$3,860	$2,155	$1,550	$3,860	$3,305	$1,550	$3,860
$25,000	$0	$1,450	$3,615	$350	$1,450	$3,765	$850	$1,450	$4,140	$975	$1,450	$4,140	$1,275	$1,450	$4,140	$1,975	$1,450	$4,140	$3,125	$1,450	$4,140
$27,000	$0	$1,250	$3,815	$350	$1,250	$3,955	$670	$1,250	$4,520	$795	$1,250	$4,520	$1,095	$1,250	$4,520	$1,795	$1,250	$4,520	$2,945	$1,250	$4,520
$29,000	$0	$1,050	$4,015	$350	$1,050	$4,165	$480	$1,050	$4,910	$605	$1,050	$4,910	$905	$1,050	$4,910	$1,605	$1,050	$4,910	$2,755	$1,050	$4,910
$31,000	$0	$750	$4,315	$350	$750	$4,465	$350	$750	$5,340	$385	$750	$5,430	$685	$750	$5,430	$1,385	$750	$5,430	$2,535	$750	$5,430
$33,000	$0	$450	$4,615	$350	$450	$4,765	$350	$450	$5,640	$350	$450	$5,765	$465	$450	$5,950	$1,165	$450	$5,950	$2,315	$450	$5,950
$35,000	$0	$250	$4,815	$350	$250	$4,965	$350	$250	$5,840	$350	$250	$5,965	$350	$250	$6,265	$945	$250	$6,370	$2,095	$250	$6,370
$37,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$725	$0	$6,840	$1,875	$0	$6,840
$39,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$505	$0	$7,060	$1,655	$0	$7,060
$41,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215	$1,435	$0	$7,280
$43,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215	$1,215	$0	$7,500
$45,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215	$995	$0	$7,720
$47,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215	$775	$0	$7,940
$49,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215	$555	$0	$8,160
$51,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215	$350	$0	$8,365
$53,000	$0	$0	$5,065	$350	$0	$5,215	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215	$350	$0	$8,365
$55,000	$0	$0	$5,065	$0	$0	$5,565	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565	$0	$0	$8,715

1989-90 ESTIMATED NET COST OF ATTENDANCE
RESIDENT STUDENT AT SUNY

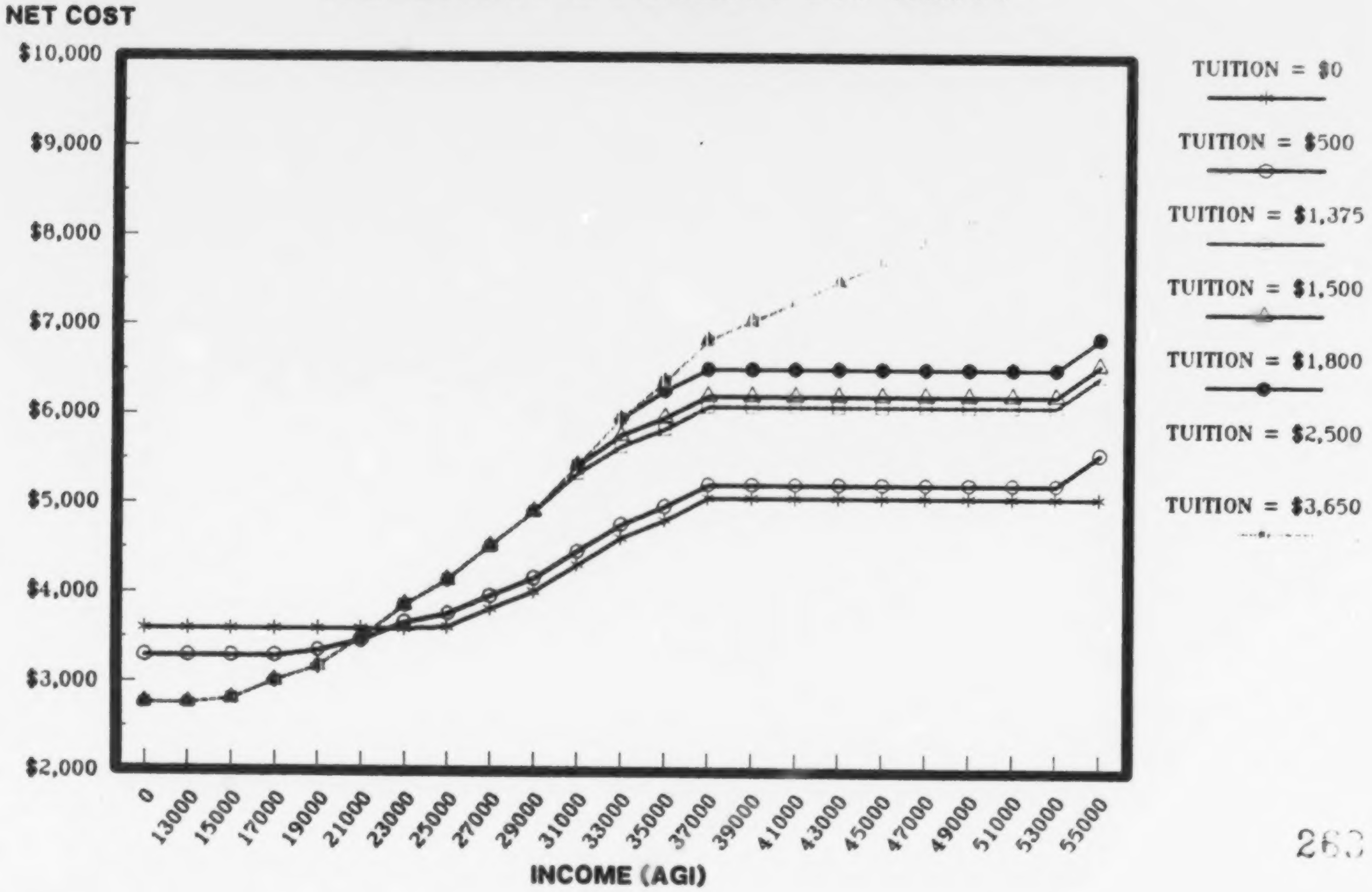

Figure 4

1989-90 ESTIMATED NET COST OF ATTENDANCE

MARRIED INDEPENDENT STUDENT IN OFF-CAMPUS LIVING QUARTERS

	TUITION = $1,375 BUDGET = $6,440			TUITION = $1,500 BUDGET = $6,565			TUITION = $1,800 BUDGET = $6,865			TUITION = $2,500 BUDGET = $7,565		
AGI	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET
$0	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$3,000	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$5,000	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$7,000	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$9,000	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$11,000	$1,375	$1,750	$3,315	$1,500	$1,750	$3,315	$1,800	$1,750	$3,315	$2,500	$1,750	$3,315
$13,000	$1,375	$650	$4,415	$1,500	$650	$4,415	$1,800	$650	$4,415	$2,500	$650	$4,415
$15,000	$1,375	$0	$5,065	$1,500	$0	$5,065	$1,800	$0	$5,065	$2,500	$0	$5,065
$17,000	$1,315	$0	$5,125	$1,440	$0	$5,125	$1,740	$0	$5,125	$2,440	$0	$5,125
$19,000	$1,195	$0	$5,245	$1,320	$0	$5,245	$1,620	$0	$5,245	$2,320	$0	$5,245
$21,000	$1,030	$0	$5,410	$1,155	$0	$5,410	$1,455	$0	$5,410	$2,155	$0	$5,410
$23,000	$850	$0	$5,590	$975	$0	$5,590	$1,275	$0	$5,590	$1,975	$0	$5,590
$25,000	$670	$0	$5,770	$795	$0	$5,770	$1,095	$0	$5,770	$1,795	$0	$5,770
$27,000	$480	$0	$5,960	$605	$0	$5,960	$905	$0	$5,960	$1,605	$0	$5,960
$29,000	$350	$0	$6,090	$385	$0	$6,180	$685	$0	$6,180	$1,385	$0	$6,180
$31,000	$350	$0	$6,090	$350	$0	$6,215	$465	$0	$6,400	$1,165	$0	$6,400
$33,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$945	$0	$6,620
$35,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$725	$0	$6,840
$37,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$505	$0	$7,060
$39,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215
$50,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215
$51,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215
$52,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565
$53,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565
$54,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565

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1989-90 ESTIMATED NET COST OF ATTENDANCE MARRIED INDEPENDENT STUDENT IN OFF-CAMPUS LIVING QUARTERS

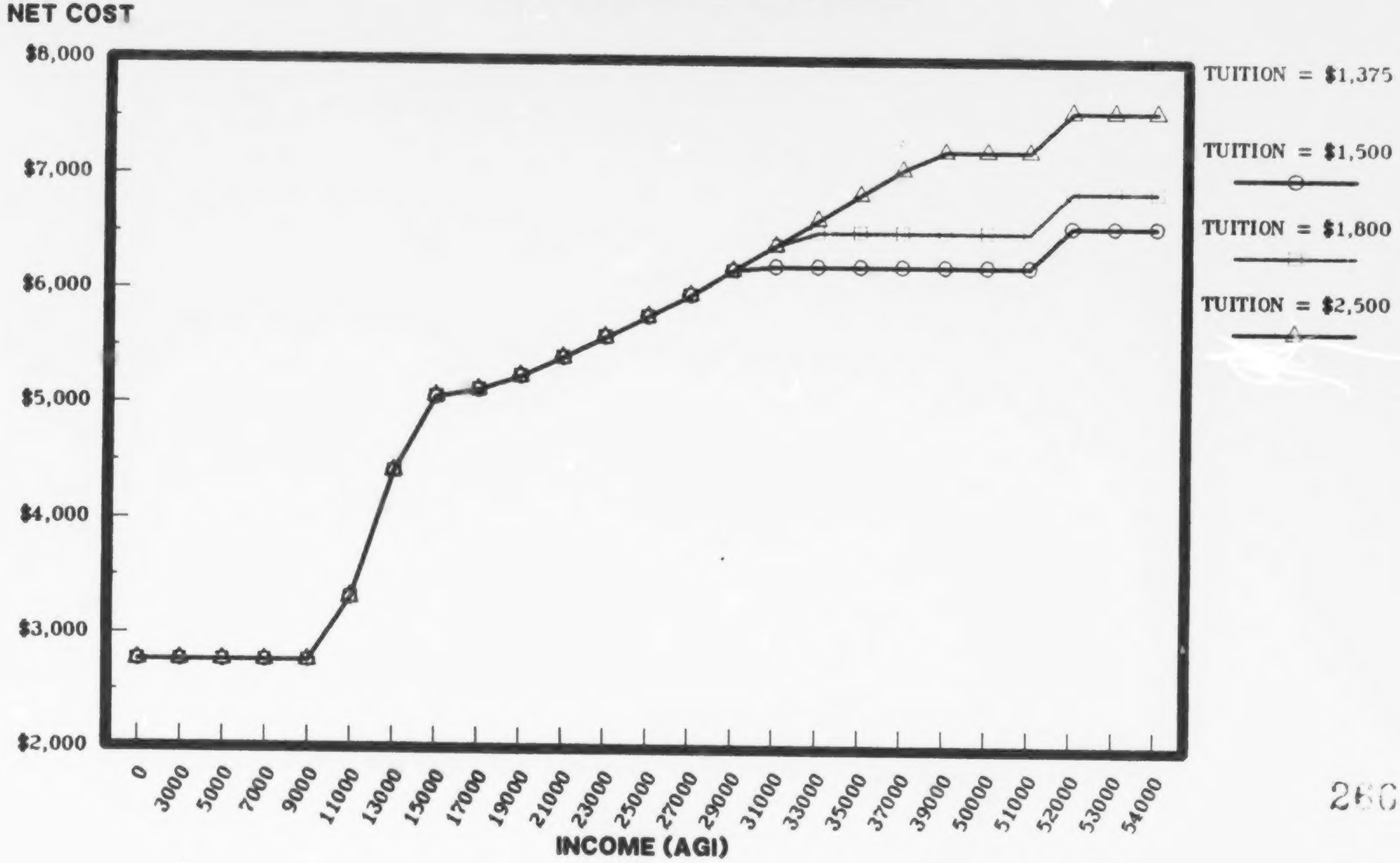

Figure 6

1989-90 ESTIMATED NET COST OF ATTENDANCE

SINGLE INDEPENDENT STUDENT WITH A CHILD IN OFF-CAMPUS LIVING QUARTERS

	TUITION = $1,375 BUDGET = $6,440			TUITION = $1,500 BUDGET = $6,565			TUITION = $1,800 BUDGET = $6,865			TUITION = $2,500 BUDGET = $7,565		
AGI	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET
$0	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$7,000	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$9,000	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$11,000	$1,375	$2,250	$2,815	$1,500	$2,250	$2,815	$1,800	$2,250	$2,815	$2,500	$2,250	$2,815
$13,000	$1,375	$2,050	$3,015	$1,500	$2,050	$3,015	$1,800	$2,050	$3,015	$2,500	$2,050	$3,015
$15,000	$1,345	$1,850	$3,245	$1,470	$1,850	$3,245	$1,770	$1,850	$3,245	$2,470	$1,850	$3,245
$17,000	$1,225	$1,750	$3,465	$1,350	$1,750	$3,465	$1,650	$1,750	$3,465	$2,350	$1,750	$3,465
$19,000	$1,075	$1,550	$3,815	$1,200	$1,550	$3,815	$1,500	$1,550	$3,815	$2,200	$1,550	$3,815
$21,000	$895	$1,350	$4,195	$1,020	$1,350	$4,195	$1,320	$1,350	$4,195	$2,020	$1,350	$4,195
$23,000	$715	$1,150	$4,575	$840	$1,150	$4,575	$1,140	$1,150	$4,575	$1,840	$1,150	$4,575
$25,000	$535	$950	$4,955	$660	$950	$4,955	$960	$950	$4,955	$1,660	$950	$4,955
$27,000	$350	$850	$5,240	$440	$850	$5,275	$740	$850	$5,275	$1,440	$850	$5,275
$29,000	$350	$450	$5,640	$350	$450	$5,765	$520	$450	$5,895	$1,220	$450	$5,895
$31,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$1,000	$0	$6,565
$33,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$780	$0	$6,785
$35,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$560	$0	$7,005
$37,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215
$39,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215
$50,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565
$51,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565
$52,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565
$53,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565
$54,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565

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1989-90 ESTIMATED NET COST OF ATTENDANCE
SINGLE INDEPENDENT STUDENT WITH A CHILD
IN OFF-CAMPUS LIVING QUARTERS

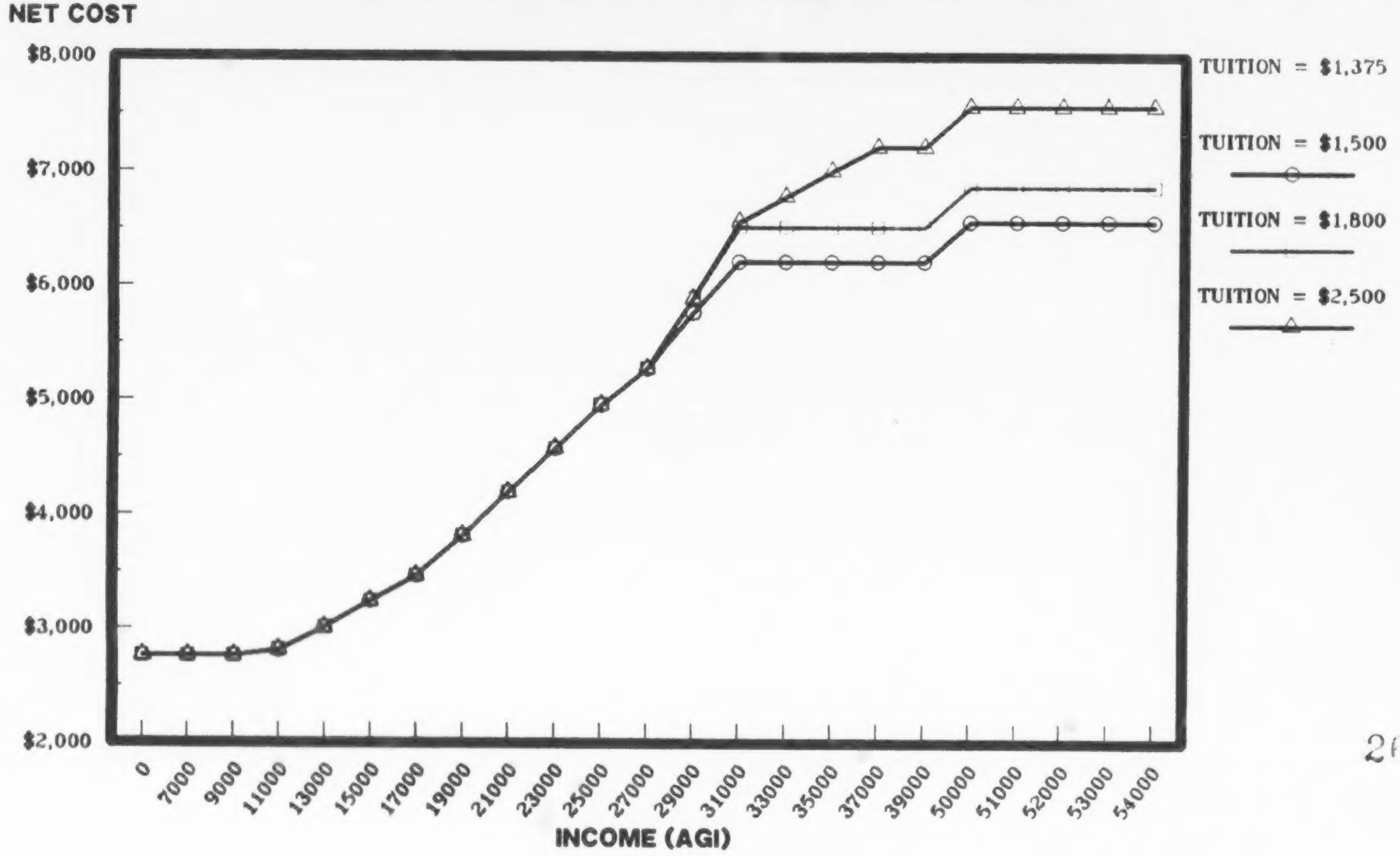

Figure 8

1989-90 ESTIMATED NET COST OF ATTENDANCE

SINGLE INDEPENDENT STUDENT ON-CAMPUS AT SUNY

	TUITION = $1,375 BUDGET = $6,440			TUITION = $1,500 BUDGET = $6,565			TUITION = $1,800 BUDGET = $6,865			TUITION = $2,500 BUDGET = $7,565		
AGI	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET
$0	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$3,000	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$5,000	$1,375	$2,300	$2,765	$1,500	$2,300	$2,765	$1,800	$2,300	$2,765	$2,500	$2,300	$2,765
$7,000	$1,375	$2,150	$2,915	$1,500	$2,150	$2,915	$1,800	$2,150	$2,915	$2,500	$2,150	$2,915
$9,000	$1,075	$1,050	$4,315	$1,200	$1,050	$4,315	$1,500	$1,050	$4,315	$2,200	$1,050	$4,315
$11,000	$475	$0	$5,965	$600	$0	$5,965	$900	$0	$5,965	$1,600	$0	$5,965
$13,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$580	$0	$6,985
$15,000	$350	$0	$6,090	$350	$0	$6,215	$350	$0	$6,515	$350	$0	$7,215
$17,000	$0	$0	$6,440	$0	$0	$6,565	$0	$0	$6,865	$0	$0	$7,565

1989-90 ESTIMATED NET COST OF ATTENDANCE
SINGLE INDEPENDENT STUDENT ON-CAMPUS AT SUNY

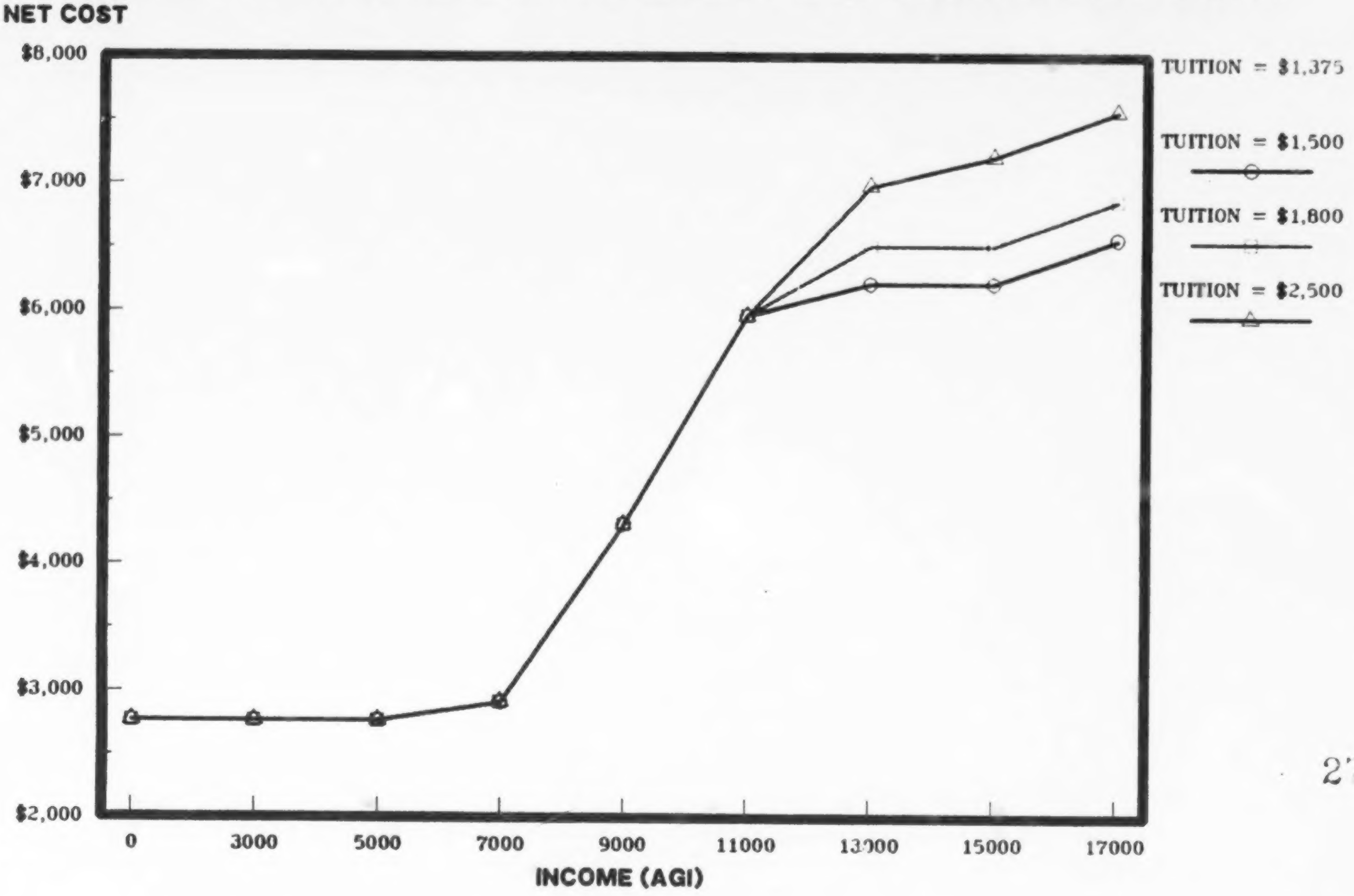

Figure 10

1989-90 ESTIMATED NET COST OF ATTENDANCE

COMMUTER STUDENT AT SUNY

	TUITION = $1,375 COST = $4,735			TUITION = $1,500 COST = $4,860			TUITION = $1,800 COST = $5,160			TUITION = $2,500 COST = $5,860		
AGI	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET	TAP	PELL	NET
$0	$1,375	$1,950	$1,410	$1,500	$2,010	$1,350	$1,800	$2,190	$1,170	$2,500	$2,300	$1,060
$13,000	$1,375	$1,950	$1,410	$1,500	$2,010	$1,350	$1,800	$2,190	$1,170	$2,500	$2,300	$1,060
$15,000	$1,375	$1,950	$1,410	$1,500	$2,010	$1,350	$1,800	$2,190	$1,170	$2,500	$2,250	$1,110
$17,000	$1,375	$1,950	$1,410	$1,500	$2,010	$1,350	$1,800	$2,050	$1,310	$2,500	$2,050	$1,310
$19,000	$1,315	$1,950	$1,470	$1,440	$1,950	$1,470	$1,740	$1,950	$1,470	$2,440	$1,950	$1,470
$21,000	$1,195	$1,750	$1,790	$1,320	$1,750	$1,790	$1,620	$1,750	$1,790	$2,320	$1,750	$1,790
$23,000	$1,030	$1,550	$2,155	$1,155	$1,550	$2,155	$1,455	$1,550	$2,155	$2,155	$1,550	$2,155
$25,000	$850	$1,450	$2,435	$975	$1,450	$2,435	$1,275	$1,450	$2,435	$1,975	$1,450	$2,435
$27,000	$670	$1,250	$2,815	$795	$1,250	$2,815	$1,095	$1,250	$2,815	$1,795	$1,250	$2,815
$29,000	$480	$1,050	$3,205	$605	$1,050	$3,205	$905	$1,050	$3,205	$1,605	$1,050	$3,205
$31,000	$350	$750	$3,635	$385	$750	$3,725	$685	$750	$3,725	$1,385	$750	$3,725
$33,000	$350	$450	$3,935	$350	$450	$4,060	$465	$450	$4,245	$1,165	$450	$4,245
$35,000	$350	$250	$4,135	$350	$250	$4,260	$350	$250	$4,560	$945	$250	$4,665
$37,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$725	$0	$5,135
$39,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$505	$0	$5,355
$41,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$350	$0	$5,510
$43,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$350	$0	$5,510
$45,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$350	$0	$5,510
$47,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$350	$0	$5,510
$49,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$350	$0	$5,510
$51,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$350	$0	$5,510
$53,000	$350	$0	$4,385	$350	$0	$4,510	$350	$0	$4,810	$350	$0	$5,510
$55,000	$0	$0	$4,735	$0	$0	$4,860	$0	$0	$5,160	$0	$0	$5,860

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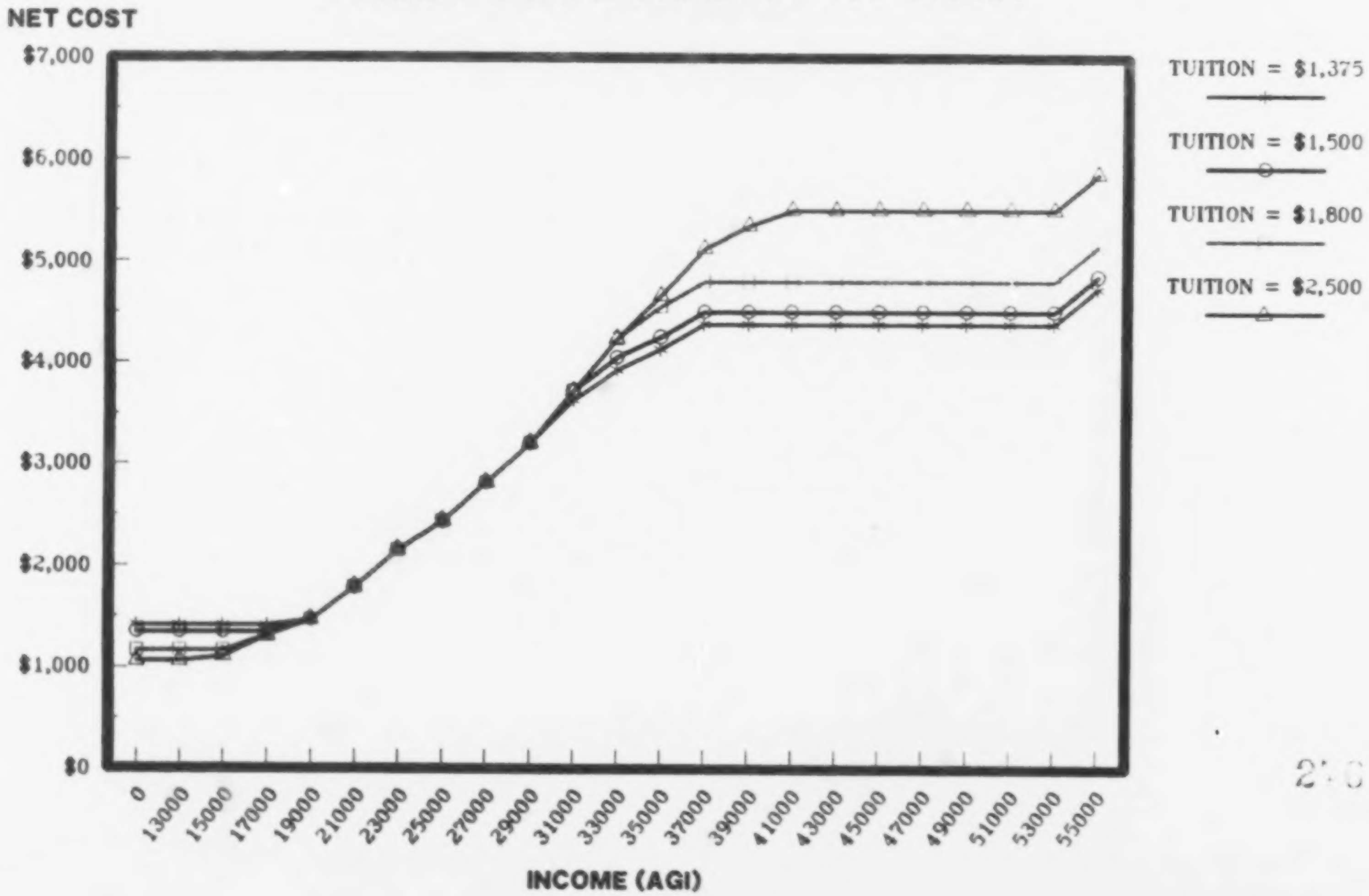
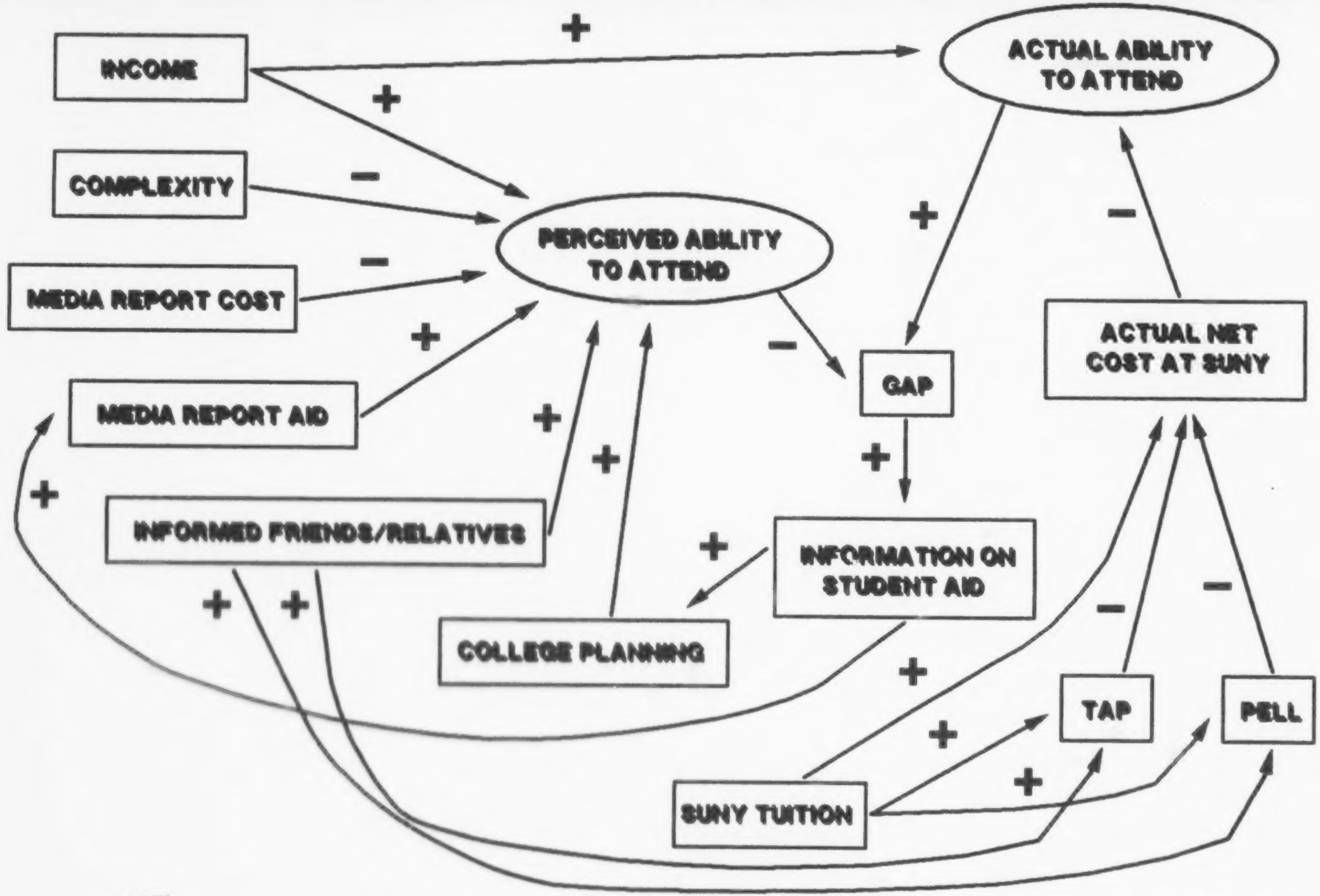
1989-90 ESTIMATED NET COST OF ATTENDANCE COMMUTER STUDENT AT SUNY



THE EFFECT OF TUITION PRICING ON ACCESS FOR AIDED STUDENTS



INCOME

ACTUAL ABILITY TO ATTEND

COMPLEXITY

PERCEIVED ABILITY TO ATTEND

MEDIA REPORT COST

MEDIA REPORT AID

ACTUAL NET COST AT SUNY

GAP

INFORMED FRIENDS/RELATIVES

INFORMATION ON STUDENT AID

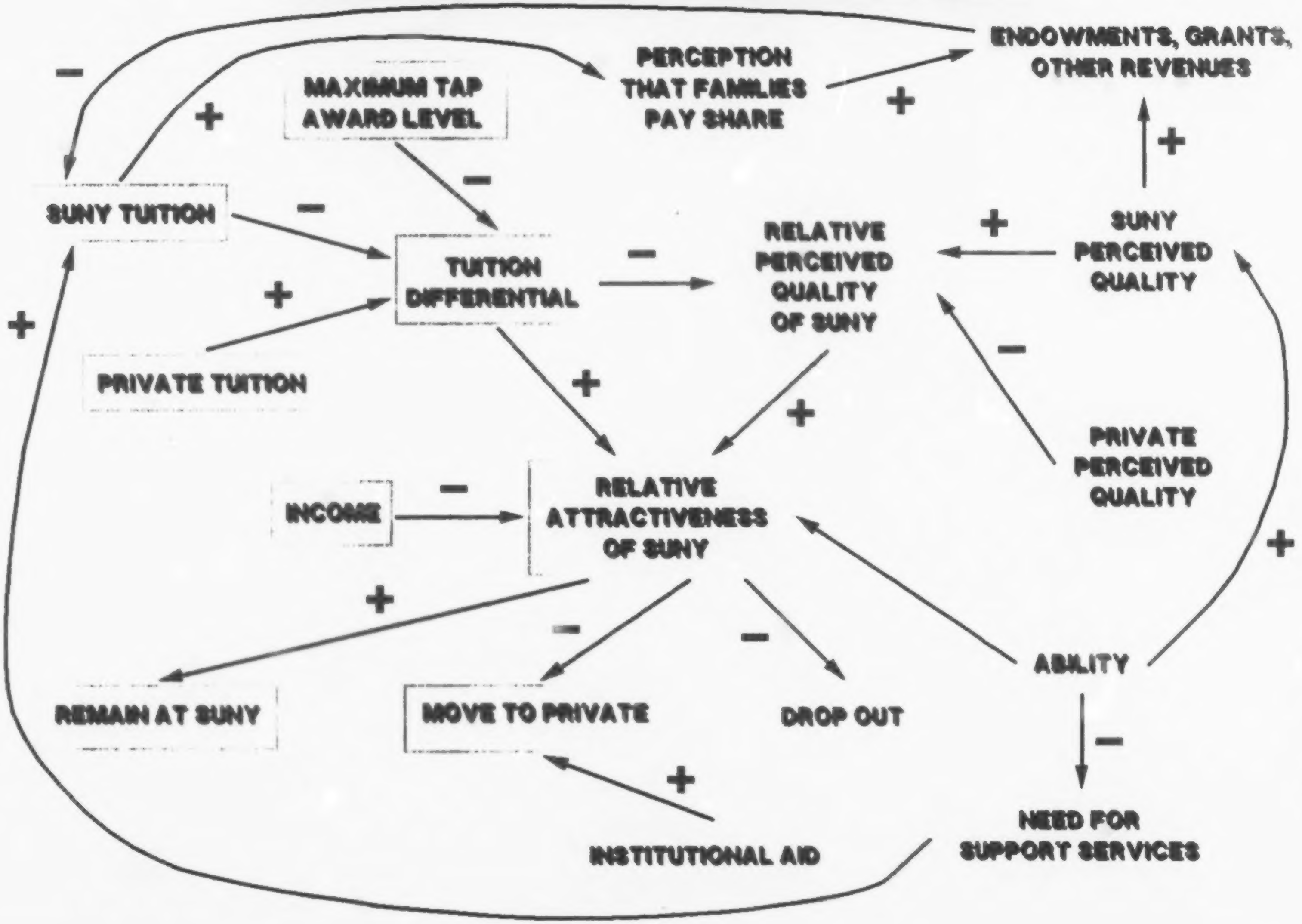
COLLEGE PLANNING

TAP

PELL

SUNY TUITION

EFFECT OF PRICING ON CHOICE



ENDOWMENTS, GRANTS, OTHER REVENUES

PERCEPTION THAT FAMILIES PAY SHARE

MAXIMUM TAP AWARD LEVEL

SUNY TUITION

TUITION DIFFERENTIAL

RELATIVE PERCEIVED QUALITY OF SUNY

SUNY PERCEIVED QUALITY

PRIVATE TUITION

PRIVATE PERCEIVED QUALITY

INCOME

RELATIVE ATTRACTIVENESS OF SUNY

ABILITY

REMAIN AT SUNY

MOVE TO PRIVATE

DROP OUT

NEED FOR SUPPORT SERVICES

INSTITUTIONAL AID

TAP AWARD SCHEDULE REVISIONS

Schedule K - Undergrad independent - degree granting - prior recipients

MAX. AWARD - $2,000 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 10,000	30% of excess over $ 3,000
10,001 or more	NO AWARD

Schedule L - Undergrad independent - degree granting - 89/90 recipients

MAX. AWARD - $2,800 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 6,500	30% of excess over $ 3,000
6,501 - 10,000	$1,050 + 58% of excess over $ 6,500
10,001 or more	NO AWARD

Schedule M - Undergrad independent - degree granting - 90/91 recipients

MAX. AWARD - $3,400 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 6,500	30% of excess over $ 3,000
6,501 - 10,000	$1,050 + 57% of excess over $ 6,500
10,001 or more	NO AWARD

TAP AWARD SCHEDULE REVISIONS

Schedule A - Undergrad dependent - degree granting - prior recipient

MAX. AWARD - $2,850 MIN. AWARD - $350

NTB		REDUCTION
$ 7,000 or less		0
7,001 - 11,000		6% of excess over $ 7,000
11,001 - 18,000	$240 +	9% of excess over $11,000
18,001 - 34,250	$870 +	11% of excess over $18,000
34,251 or more		NO AWARD

Schedule B - Undergrad dependent - degree granting - 89/90 recipients

MAX. AWARD - $3,650 MIN. AWARD - $350

NTB		REDUCTION
$ 7,500 or less		0
7,501 - 11,000		6% of excess over $ 7,500
11,001 - 18,000	$210 +	9% of excess over $11,000
18,001 - 42,500	$840 +	11% of excess over $18,000
42,501 or more		NO AWARD

Schedule C - Undergrad dependent - degree granting - 90/91 recipients

MAX. AWARD - $4,125 MIN. AWARD - $350

NTB		REDUCTION
$ 8,000 or less		0
8,001 - 11,000		6% of excess over $ 8,000
11,001 - 18,000	$180 +	9% of excess over $11,000
18,001 - 50,500	$810 +	11% of excess over $18,000
50,501 or more		NO AWARD

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NEW

TAP

AWARD

SCHEDULES

October 17, 1988

TAP AWARD SCHEDULE REVISIONS

Schedule A - Undergrad dependent - degree granting - prior recipient

MAX. AWARD - $2,850 MIN. AWARD - $350

NTB	REDUCTION
$ 7,000 or less	0
7,001 - 11,000	6% of excess over $ 7,000
11,001 - 18,000	$240 + 9% of excess over $11,000
18,001 - 34,250	$870 + 11% of excess over $18,000
34,251 or more	NO AWARD

Schedule B - Undergrad dependent - degree granting - 89/90 recipients

MAX. AWARD - $3,650 MIN. AWARD - $350

NTB	REDUCTION
$ 7,500 or less	0
7,501 - 11,000	6% of excess over $ 7,500
11,001 - 18,000	$210 + 9% of excess over $11,000
18,001 - 42,500	$840 + 11% of excess over $18,000
42,501 or more	NO AWARD

Schedule C - Undergrad dependent - degree granting - 90/91 recipients

MAX. AWARD - $4,125 MIN. AWARD - $350

NTB	REDUCTION
$ 8,000 or less	0
8,001 - 11,000	6% of excess over $ 8,000
11,001 - 18,000	$180 + 9% of excess over $11,000
18,001 - 50,500	$810 + 11% of excess over $18,000
50,501 or more	NO AWARD

TAP AWARD SCHEDULE REVISIONS

Schedule F - Undergrad dependent - non-degree - prior recipients

MAX. AWARD - $2,200 MIN. AWARD - $350

NTB	REDUCTION
$ 7,000 or less	0
7,001 - 11,000	6% of excess over $ 7,000
11,001 - 18,000	$240 + 9% of excess over $11,000
18,001 - 34,250	$870 + 11% of excess over $18,000
34,251 or more	NO AWARD

Schedule G - Undergrad dependent - non-degree - 89/90 recipients

MAX. AWARD - $2,200 MIN. AWARD - $350

NTB	REDUCTION
$ 7,500 or less	0
7,501 - 11,000	6% of excess over $ 7,500
11,001 - 18,000	$210 + 9% of excess over $11,000
18,001 - 42,500	$840 + 11% of excess over $18,000
42,501 or more	NO AWARD

Schedule H - Undergrad dependent - non-degree - 90/91 recipients

MAX. AWARD - $2,200 MIN. AWARD - $350

NTB	REDUCTION
$ 8,000 or less	0
8,001 - 11,000	6% of excess over $ 8,000
11,001 - 18,000	$180 + 9% of excess over $11,000
18,001 - 50,500	$810 + 11% of excess over $18,000
50,501 or more	NO AWARD

TAP AWARD SCHEDULE REVISIONS

Schedule K - Undergrad independent - degree granting - prior recipients

MAX. AWARD - $2,000 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 10,000	30% of excess over $ 3,000
10,001 or more	NO AWARD

Schedule L - Undergrad independent - degree granting - 89/90 recipients

MAX. AWARD - $2,800 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 6,500	30% of excess over $ 3,000
6,501 - 10,000	$1,050 + 58% of excess over $ 6,500
10,001 or more	NO AWARD

Schedule M - Undergrad independent - degree granting - 90/91 recipients

MAX. AWARD - $3,400 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 6,500	30% of excess over $ 3,000
6,501 - 10,000	$1,050 + 57% of excess over $ 6,500
10,001 or more	NO AWARD

TAP AWARD SCHEDULE REVISIONS

Schedule P - Undergrad independent - non-degree - prior recipients

MAX. AWARD - $1,800 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 10,000	30% of excess over $ 3,000
10,001 or more	NO AWARD

Schedule Q - Undergrad independent - non-degree - 89/90 recipients

MAX. AWARD - $1,800 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 6,500	30% of excess over $ 3,000
6,501 - 10,000	$1,050 + 58% of excess over $ 6,500
10,001 or more	NO AWARD

Schedule R - Undergrad independent - non-degree - 90/91 recipients

MAX. AWARD - $1,800 MIN. AWARD - $350

NTB	REDUCTION
$ 3,000 or less	0
3,001 - 6,500	30% of excess over $ 3,000
6,501 - 10,000	$1,050 + 57% of excess over $ 6,500
10,001 or more	NO AWARD

TAP AWARD SCHEDULE REVISIONS

Schedule U - Graduate Dependent

MAX. AWARD - $1,200 MIN. AWARD - $100

NTB	REDUCTION
$ 2,000 or less	0
2,001 - 18,500	6.67% of excess over $2,000
18,501 - 20,000	$1,100
20,000 or more	NO AWARD

Schedule V - Graduate Independent

MAX. AWARD - $1,200 MIN. AWARD - $100

NTB	REDUCTION
$ 1,000 or less	0
1,001 - 5,400	25% of excess over $1,000
5,401 - 5,666	$1,100
5,667 or more	NO AWARD

FINANCING THE COST OF ATTENDANCE: HOW MUCH DO STUDENTS PAY?

Patricia S. Grimes and Gregory E. McAvoy[1]
Minnesota Higher Education Coordinating Board

In Fiscal Year 1987, Minnesota provided $90 million in financial aid to its undergraduate post-secondary students. This included $63 million from the State Scholarship and Grant Program, $1 million from the Part-Time Grant Program, $11 million from the Supplemental Educational Loan Fund (SELF), $6 million from the State Work-Study program, and $9 million from other state and local agency grants. The Minnesota Higher Education Coordinating Board also served as the lender of last resort for the federal Stafford Loan Program.

In addition, Minnesota undergraduate students received $285 million in federal financial aid, $75 million in aid awarded by post-secondary institutions, and $13 million in aid from private and other sources. In total, Minnesota undergraduates received about $463 million in all forms of financial aid.

In 1987, the Minnesota Higher Education Coordinating Board began an evaluation of state financial aid programs and the packages of aid received by students. This paper focuses on the development of the data base and how it was used to answer the following questions:

a. How does the cost of attendance used by institutional financial aid offices compare to the cost of attendance used in the Minnesota State Scholarship and Grant Program?

b. What portion of the cost of attendance are students expected to cover themselves?

This paper presents the research results. Conclusions and recommendations based on the research will be developed by the Coordinating Board over the next few months.

Section I describes the establishment of the financial aid data base. Section II addresses the cost of attendance. Section III addresses the question regarding the portion of the cost of attendance students are expected to pay. Finally, the development of the data base was done as a pilot effort. One of the principal results of the project is the lessons learned in the process. These lessons are discussed in Section IV.

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[1] The views expressed in this paper are those of the authors. This paper is based on research conducted for the Minnesota Higher Education Coordinating Board. The authors thank their colleagues for their assistance. The authors, however, accept full responsibility for all errors that remain.

I. DATA COLLECTION

In 1988, the Minnesota Higher Education Coordinating Board surveyed financial aid directors about a sample of State Scholarship and Grant Program applicants. This section outlines the data collection procedures.

Population

The sample was drawn from the population of students that met the following criteria:

- Applied to the State Scholarship and Grant Program during 1986-87.
- Attended the institution indicated in the application file.

Eligibility for the State Scholarship and Grant Program is limited to Minnesota residents who are attending post-secondary institutions in Minnesota, who are registered for at least a half-time load, and who have not completed four years of post-secondary education or received a baccalaureate degree. The population consisted of "cleared" applications. Cleared applications are those for which the information provided is complete and students meet the eligibility criteria. The sample was drawn after the end of the application period, the 1986-87 academic year.

The population represents about 80 percent of the students who would have been eligible for a state scholarship or grant. Institutions participating in the Minnesota Higher Education Coordinating Board's 1986 Fall Term Enrollment Survey reported 145,000 students who were potentially eligible for a state scholarship or grant. During the 1986-87 academic year, 126,000 students applied to the State Scholarship and Grant Program.

Sample Design

There were 150 post-secondary institutions that had at least one student apply to the State Scholarship and Grant Program in Fiscal Year 1987. Financial aid directors at all of these institutions were asked to participate in the survey.

A stratification based on system, institution type and location was used. Six system categories were used (see Table 1). Institution types were defined as two-year and four-year. Location types were defined as (1) the Twin Cities area and (2) other. This created 24 possible categories. Eleven of the categories were empty, so 13 categories were used in the analysis.

Table 1.

Number of Institutions by Institutional Category

System	Two-Year		Four-Year		
	Twin Cities Area	Other	Twin Cities Area	Other	Total
Technical Institutes	6	27	0	0	33
Community Colleges	6	12	0	0	18
State Universities	0	0	1	6	7
University of Minnesota	0	2	1	2	5
Private 4-Yr Institutions	0	0	14	11	25
Private 2-Yr Institutions	42	20	0	0	62
Total	54	61	16	19	150

Source: Minnesota Higher Education Coordinating Board

In the nine categories with six or more institutions, financial aid directors were asked to provide data about 10 students. At institutions with fewer than 10 applicants, financial aid directors were asked to provide data for each applicant who attended that institution. In each of these categories, the resulting sample size was at least 60 students, the minimum deemed necessary for the pilot test.

The University of Minnesota-Twin Cities was asked to provide 60 student records. Financial aid directors at institutions in categories with fewer than six institutions were asked to provide data about 20 students. This is a large enough sample to determine if a category should be merged with another category. The smaller sample size was requested so the costs to these institutions would be limited.

Procedures for Selecting Sample

A random sample of applicant names was drawn for each institution. The names and other identifying information were printed on labels that were sent to the financial aid directors as part of a package.

To compensate for applicants who did not enroll at the institution as planned, twice as many names were provided as needed. If more than half of the original set did not enroll, additional names were sent to the institution. These names had been drawn with the original set. This eliminated the problem of resampling.

The labels contained five data elements: name, social security number, institution, birth date, and sequence number. The sequence number was determined as part of the sampling process and indicated the order in which financial aid directors were to consider the students.

Applicants Not Attending. Financial aid directors were asked to remove from the roster those who did not attend the institution during the 1986-87 award year. Financial aid directors were requested to return these labels on a special form. Students who dropped out before completing ten days during the award year were also to be defined as not attending and these labels were also to be returned.

Students Attending. Of the remaining students, financial aid directors selected those with the lowest sequence numbers. A label for each of these students was attached to the front sheet of a Student Questionnaire.

Students Not Needed. If any labels were left over, these were to be returned as well. This provided a means of checking that the sample had been drawn properly.

Questionnaire Development

An advisory committee of financial aid administrators and representatives of Minnesota's four public systems and two associations of private institutions was formed. The advisory committee provided extensive feedback on a list of issues to be addressed in the survey.

As part of the questionnaire development process, the record abstract form from the National Postsecondary Student Aid Study was reviewed. The Washington Higher Education Coordinating Board's unit financial aid record data questionnaire was also examined.

In addition, options for data transfer from the institutions to the Coordinating Board were reviewed. The idea of transferring data electronically, at least for the institutions with computerized systems, was considered. A paper transfer of data was selected because it allows for more flexibility. Paper questionnaires allow institutional staffs to explore different means of providing the data. Electronic transfer requires that all processes be set before data collection begins.

Advisory Committee members commented on drafts of the questionnaires and conducted a field test.

The questionnaires did not collect information that was maintained by the Coordinating Board. Information on awards received by students was extracted from records and matched with the information provided on the questionnaires.

Procedures for Collecting the Data

Notification of the Systems. The chief executive officers of the public systems and of the two associations of private institutions were sent a description of the project. They were asked to inform campus leaders about the survey.

Mailing of Survey Materials. The questionnaires were sent to financial aid directors in a package that included the labels with the names of the students, the procedure for selecting a sample from those labels, a nondisclosure agreement that assured financial aid directors that the data would be handled according to state data privacy procedures, and two post-paid envelopes for returning the unused labels and, later, the completed questionnaires.

Follow-up Procedures. The survey procedures requested that financial aid directors return some of the information immediately. This made follow-up easier. Staff monitored responses to determine if progress was being made.

Follow-up activities for the survey included:

- After two weeks, nearly half of the financial aid directors had returned at least some of the survey materials. A reminder was sent to financial aid directors who had not contacted the Coordinating Board staff.
- After four weeks, nearly 80 percent of the financial aid directors had returned at least some of the survey materials. A second reminder letter was sent to financial aid directors who still had not contacted Coordinating Board staff.
- After five weeks, 83 percent of the financial aid directors had returned some survey materials. Individualized letters were sent to financial aid directors who had contacted Coordinating Board staff by telephone, or submitted some, but not all, survey materials.
- After six weeks, Coordinating Board staff called and sent letters to financial aid directors who had not completed the survey materials.
- After 10 weeks, Coordinating Board staff requested members of the advisory committee to contact financial aid directors who had not completed the survey materials.
- After 18 weeks, 98 percent of the financial aid directors had returned all survey materials.

II. WHAT IS THE COST OF ATTENDANCE ALLOWANCE USED BY INSTITUTIONAL FINANCIAL AID OFFICES?

One aspect of the Minnesota State Scholarship and Grant Program that often has been challenged is the living and miscellaneous expense allowance used in calculating the state award. The living and miscellaneous expense allowance is added to tuition and fees to calculate the cost of attendance. The State Scholarship and Grant Program uses a standard living and miscellaneous expense allowance for all students. This is expected to cover the out-of-pocket expenses of a frugal student during the period of attendance.

Institutions establish their own cost of attendance budget for each student applying for campus-based and institutional financial aid. Financial aid administrators report that they vary the living and miscellaneous expense allowances according to the characteristics and circumstances of individual students.

In this section, the living and miscellaneous expense allowance used in the State Scholarship and Grant Program is compared with the allowances used by institutions. In addition, the variance in the living and miscellaneous expense allowances specified by the institutions is examined with regard to the following questions:

- Are institutional allowances the same across institutional categories?
- How do student characteristics affect institution-specified allowances?
- If institutions used the Minnesota State Scholarship and Grant Program methodology, what living and miscellaneous expense allowance would students have?

Methods of Calculating the Cost of Attendance

In Fiscal Year 1987, Minnesota institutions determined the cost of attendance following the guidelines of a national need analysis system called Uniform Methodology. The Minnesota State Scholarship and Grant Program used a different methodology to calculate the cost of attendance. Tuition and fees were treated similarly in both methodologies. For dependent students, there was little difference in how the living and miscellaneous expense allowance was specified. For independent students, the principal difference between the two methodologies was how the expenses of supporting other household members were treated.

Uniform Methodology. Uniform Methodology assumed that for an independent student, the cost of attendance included costs associated with maintaining a student and his or her immediate family. This is shown in Figure 1. The expected student contribution reflected all of the resources available to support this household unit.

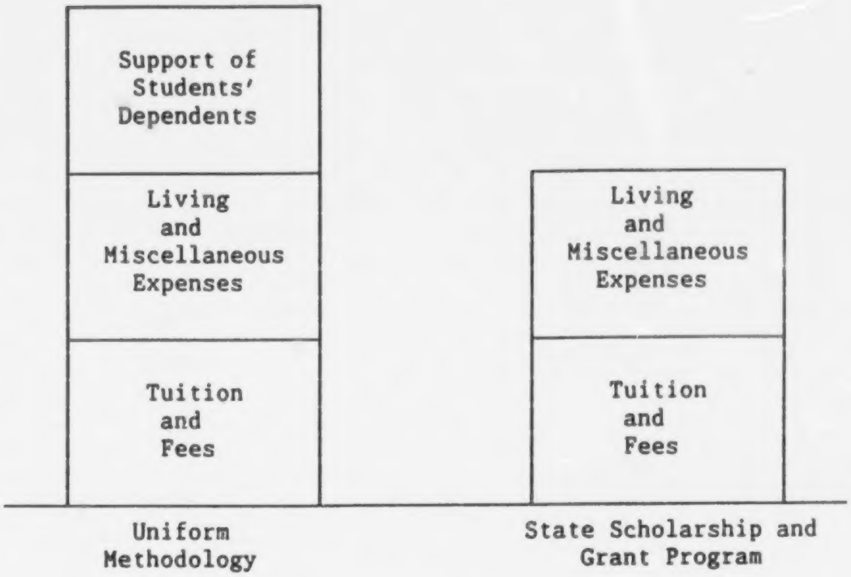
State Scholarship and Grant Program Methodology. The Minnesota State Scholarship and Grant Program used a different methodology to determine awards. The living and miscellaneous expense allowance included only the costs necessary to support a student during the period of attendance. Other costs of supporting a household were taken as deductions from the student's income in determining the expected student contribution. As a result, the cost of attendance and expected student contribution were both lower using the State Scholarship and Grant Program system.

Allowances Depend on the Student Characteristics

Minnesota financial aid directors indicated that institution-specified budgets reflect the following student characteristics: number of dependents, marital status, housing arrangements, age, and dependency status. Using regression analysis, the reported institution-specified living and miscellaneous expense allowance was adjusted. This adjustment creates a calculated value that is comparable to the allowance used in the State Scholarship and Grant Program.

Figure 1.

Methods of Calculating the Cost of Attendance


Support of Students' Dependents
Living and Miscellaneous Expenses
Tuition and Fees
Living and Miscellaneous Expenses
Tuition and Fees
Uniform Methodology
State Scholarship and Grant Program

The standardized regression coefficients (or beta weights) indicate the relative impact of each of the independent variables (see Table 2). The number of dependents in the student's family was the most important variable in explaining the differences among institution-specified living and miscellaneous expense allowances. The other demographic variable that explained large differences in institutional specified allowances was marital status.

The average impact of each of the demographic variables is shown in the first six lines of Table 2. Students with dependents typically received $1,322 more for each dependent than students without dependents. Being married raised the living and miscellaneous expense allowance by $1,851. The institution-specified allowance increased for older students. They generally received $46 for each year of age. In addition, students eligible to apply as independent students typically had allowances that were $294 higher than dependent students. Finally, students living off-campus generally had a living and miscellaneous allowance that was $321 more than students living on-campus and students living at home had an allowance that was $491 less than students living on-campus. The amount of variance (R^2) explained by the regression analysis was 67 percent. For cross-sectional studies, this is quite high.

The correlations among the variables in the equation are shown in Table 3. Although some of the correlations among the independent variables are strong, none are so high that multicollinearity should be a problem in the regression analysis.

The average living and miscellaneous expense allowance was $5,072. This is the predicted value using the regression equation and weighted averages reported in Table 2. The sample observations were weighted to obtain averages for the independent variable that reflected the population of applicants.

Allowances Vary Across Institutional Categories

Given these regression results, comparisons of institutional categories can be done accounting for student characteristics. Accounting for student characteristics will insure that the observed differences in institutional living and miscellaneous allowances are not the result of differences in the student populations attending the institutions.

The institutional categories were included in the regression as a set of dummy (zero-one) variables. They were all significant at the .05 level (see Table 2). This indicates that the differences exist among institutional categories even when controlling for differences in student characteristics.

Testing the significance of the institutional variables by entering them as a block indicates that while the additional explanatory power of these variables is significant, the additional explanatory power is

Table 2.

Regression Results Explaining the Institution-Specified Living and Miscellaneous Expense Allowance

Variable	b	Stand Error b	Beta	t	Signif	Weight Ave
Number of Dependent Children	$1,322	63	0.48	20.82	0.00	0.43
Living at Home	-$491	186	-0.07	-2.65	0.01	0.17
Is Married	$1,851	166	0.23	11.18	0.00	0.14
Age in Years	$46	10	0.12	4.50	0.00	23.32
Living Off-Campus	$321	171	0.06	1.87	0.06	0.57
Is an Independent Student	$294	166	0.05	1.78	0.08	0.36
Technical Institute-Other	$1,667	326	0.25	5.11	0.00	0.18
Community College-Twin Cities	$1,633	388	0.12	4.21	0.00	0.07
Community College-Other	$908	351	0.09	2.58	0.01	0.08
State University-Twin Cities	$3,738	501	0.16	7.46	0.00	0.01
State University-Other	$848	383	0.06	2.21	0.03	0.13
U of Minnesota-Twin Cities	$2,600	380	0.20	6.84	0.00	0.15
U of Minnesota-4 Year-Other	$2,097	415	0.16	5.05	0.00	0.06
U of Minnesota-2 Year-Other	$918	427	0.06	2.13	0.03	0.01
Private Four-Year-Twin Cities	$1,469	352	0.16	4.17	0.00	0.10
Private Four-Year-Other	$799	370	0.08	2.16	0.03	0.09
Private Two-Year-Twin Cities	$1,159	329	0.16	3.52	0.00	0.06
Private Two-Year-Other	$1,019	366	0.09	2.78	0.01	0.01
(Constant)	$1,496	397		3.77	0.00	

R Squared = .67

Source: Minnesota Higher Education Coordinating Board

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Table 3.

Correlation Among the Demographic Variables

	Variables						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1. Living & Misc. Expenses	1.00	-0.30	0.46	0.58	0.58	0.59	0.73
2. Living at Home	-0.30	1.00	-0.57	-0.19	-0.27	-0.37	-0.22
3. Living Off-Campus	0.46	-0.57	1.00	0.32	0.47	0.61	0.38
4. Is Married	0.58	-0.19	0.32	1.00	0.40	0.46	0.52
5. Age in Years	0.58	-0.27	0.47	0.40	1.00	0.72	0.55
6. Is an Independent Student	0.59	-0.37	0.61	0.46	0.72	1.00	0.57
7. Number of Dependent Children	0.73	-0.22	0.38	0.52	0.55	0.57	1.00

Definition of Variables:

1: Living and Miscellaneous Expenses is the institution specified allowance room, board, books, equipment and other expenses of attending a post-secondary institution. It does not include tuition and fees.

2: Living at Home means the student lives at home with parents. This is a dummy variable, where living at home equals 1.00.

3: Living Off-Campus means living off-campus and not living with parents. This is a dummy variable where living off-campus equals 1.00.

4: Is Married means that the student is married. This is a dummy variable, where being married equals 1.00.

5: Age in years is equal to the year of the student's birth minus 1986.

6: Is an Independent Student means that the student is defined as an independent student by the federal Pell Grant program. For students who did not receive a Pell Grant, the definition of independent student from the Minnesota State Scholarship and Grant program was used.

7: Number of Dependent Children is the value reported by the student on the Family Financial Statement.

Source: Minnesota Higher Education Coordinating Board limited. Based on a regression with just the six demographic variables, the amount of variance (R^2) explained was 63 percent. Thus, the addition of the institutional categories added four percentage points to the explanation. This relatively small contribution of the institutional category variables to amount of variance explained indicates that the demographic variables are more important in accounting for differences in the institution-specified living and miscellaneous expense allowance.

Adjusted Living and Miscellaneous Expense Allowance

The institution-specified allowance adjusted to reflect only the costs associated with supporting the student while attending for an 18 year old student living off-campus and attending a Community College outside of the Twin Cities area was $3,562. For a student attending the University of Minnesota Twin Cities, the comparable allowance for an 18 year old student living on-campus was $4,934. These two examples show the magnitude of the differences between the living and miscellaneous expenses considered by institutions and the allowance of $2,960 used in the State Scholarship and Grant Program.

Summary

The living and miscellaneous expense allowance used in the State Scholarship and Grant Program for Fiscal Year 1987 was lower than the allowances specified by the institutions. Adjusting for the number of dependents, marital status, housing arrangements, age, and dependency status did not change this conclusion.

The allowance varies by institutional category. Although differences existed across institutional categories, institutional variables did not add much to the amount of variance explained. This finding suggests that while institution types differ in the way that they calculate living and miscellaneous expense allowances, student characteristics have more explanatory power.

III. WHAT PORTION OF THE COST OF ATTENDANCE ARE STUDENTS EXPECTED TO COVER THEMSELVES?

A second aspect of the State Scholarship and Grant Program often challenged is how much of the cost of attendance students are expected to pay defined in this paper as the student share. The concept of the student share is important in Minnesota, because the Minnesota State Scholarship and Grant program is based on the expectation that students cover 50 percent of the cost of attendance. The other 50 percent of the cost of attendance is to be covered by the student's family, the federal Pell Grant Program, and the Minnesota State Scholarship and Grant Program according to the financial need of the family.

For this study, the student share is defined as the amount the student is expected to finance as a percentage of the institution-specified cost of attendance. The amount dependent students are expected to finance is the institution-specified cost of attendance less the combination of grant (gift) aid and the expected parental contribution. Those eligible to apply as independent students have the cost of supporting their dependents included in the cost of attendance allowance. Thus, the amount independent students are expected to finance is the institution-specified cost of attendance less the combination of grant (gift) aid and the expected student contribution.

The analysis of the student share is done using two extreme cases. The first case limits the parental contribution to the cost of attendance. The second case limits the parental contribution to 50 percent of the cost of attendance.

Case I Results: Capping the Expected Parental and Student Contribution at the Cost of Attendance

The expected parental and student contributions can exceed the cost of attendance for those who have substantial financial resources. If the full amount were used, the student share would be negative. In order to differentiate between those students who have a negative student share because they are recipients of grant aid and those with large family resources, the expected parental contribution for dependent students and the expected student contribution for students eligible to apply as independent students are capped at the cost of attendance.[2]

Distribution of Student Shares. The average student share based on a weighted average of students in the sample, was 42 percent. Student shares ranged from -74 to 100 percent. Within institutional categories, average student shares ranged from 31 to 50 percent as shown in Figure 2.

Students attending University of Minnesota and private two-year institutions outside the Twin Cities area had the highest average student share. Students attending private four-year institutions, both within and outside the Twin Cities area, and the state university in the Twin Cities area had the lowest average student shares.

An analysis of variance using institutional category as the independent variable indicated that there were significant differences across the categories. The hypothesis of no significant differences was rejected based on the overall F-statistic.

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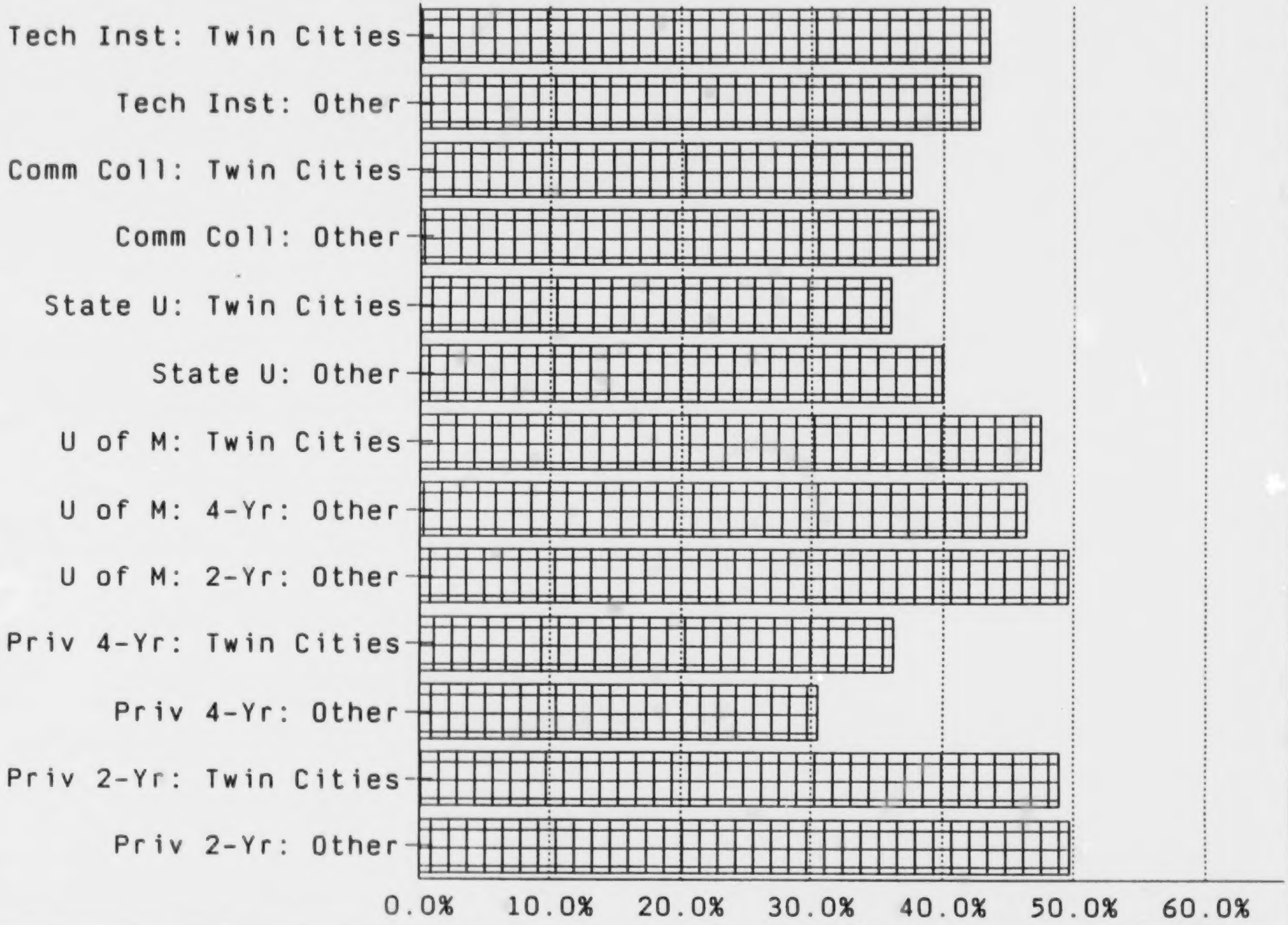
[2] Dependent students are not assessed a student contribution in the Minnesota State Scholarship and Grant Program. Instead, they are expected to cover 50 percent of the cost of attendance.

Figure 2. Student Share by Institutional Category
Case I



Case II Results: Capping the Expected Parental and Student Contribution at 50 Percent of the Cost of Attendance

The State Scholarship and Grant Program limits the parent responsibility to 50 percent of the cost of attendance. Therefore, the analysis of student share also was done by capping both the expected parental for dependent students and the expected student contributions for independent students at 50 percent of the cost of attendance. This section presents a set of results that parallel those in the previous section.

Distribution of Student Shares. The average student share based on a weighted average of students in the sample, was 49 percent. Student shares ranged from -31 to 100 percent. Within institutional categories, average student shares ranged from 40 to 58 percent as shown in Figure 3.

The results for this definition of student share show higher average student shares than Case I. Based on an analysis of variance, not all institutional category averages were equal; there was a difference across institutions.

The student shares for the Technical Institutes in the Twin Cities area, the the University of Minnesota two-year institutions, and the private two-year institutions located within the Twin Cities area were the highest. The student shares for the private four-year institutions were the lowest.

Summary

For Case I (expected parental contributions for dependent students and student contributions for independent students were capped at the cost of attendance), the overall student share was 42 percent. In Case II (expected parental and student contributions was capped at 50 percent of the cost of attendance), the overall student share was 49 percent. In general, an expected student share of 50 percent is within the range observed among applicants to the Minnesota State Scholarship and Grant Program.

By institutional category, certain patterns hold across both Case I and Case II. In both Case I and Case II, University of Minnesota and the private two-year institutions were among the highest. The average student shares for the State Universities and private four-year institutions were among the lowest. The results for the Technical Institutes and the Community Colleges differed depending on the measure used.

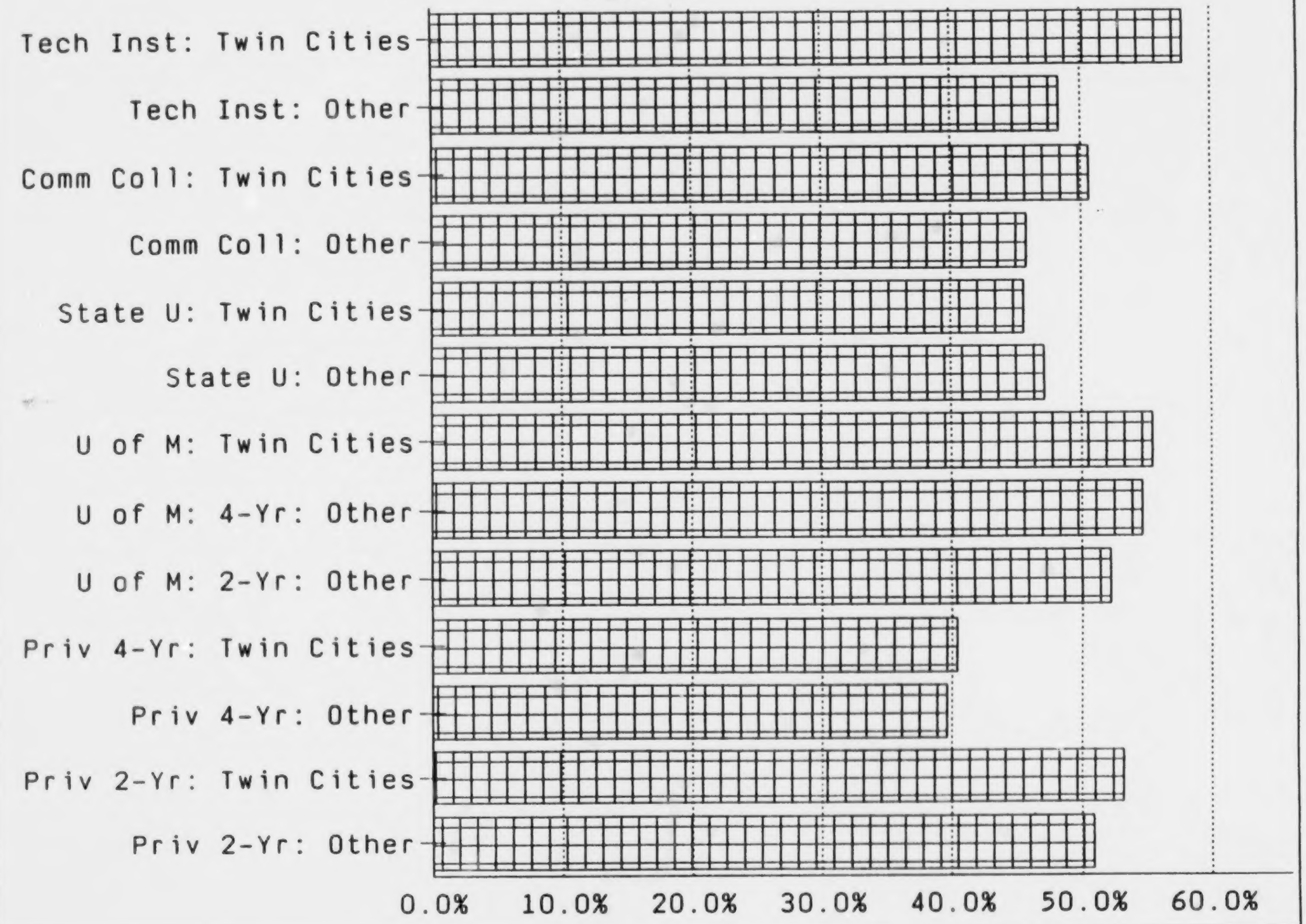


Figure 3. Student Share by Institutional Cateogory
Case II

IV. ADVANTAGES AND DISADVANTAGES OF THE METHODS USED IN THE PILOT PROJECT

The survey provided an opportunity to determine the feasibility of maintaining an ongoing financial aid data base using sample data. This section discusses some of the advantages and disadvantages of the methods used in the Fiscal Year 1987 survey.

Use of State Scholarship and Grant Program Applicant Population

Using the population of students who had applied for the Minnesota State Scholarship and Grant program had several advantages. First, some data about the students were available in the agency.

Second, characteristics of the population were known. Since the Coordinating Board uses the applications as a basis for awarding grants, the applications were checked for the accuracy of data on characteristics such as the residency status of the applicant, whether the applicant was registered for at least a half-time course load, whether the applicant had already received four years of aid, and whether the applicant had already received a baccalaureate degree.

Third, a number of the limitations of the population were known from previous experience with the data. It was known that some students do not apply for state financial aid even though they apply for federal and institutional aid. It was known that students attending an institution that does not participate in the state program were not in the population.

Fourth, on the application there was a disclosure that the data in the application could be used for research purposes and that the agency was legally permitted to share the data with other educational institutions. This meant that the roster of names of students in the sample that was provided to the financial aid directors could include social security numbers, names, and birthdates of applicants and remain in compliance with state data privacy laws.

Fifth, the survey did not collect data that had already been reported to the Coordinating Board. The data on the applications are available for research purposes. In addition, the agency had information about aid the students had received from three other state programs.

A disadvantage of using this population is that information on students who did not apply to the State Scholarship and Grant program was not available. This means that there are no data about approximately 20 percent of the eligible students who attended Minnesota institutions in Fiscal Year 1987.

Use of a Small Number of Observations from Each Campus

An important advantage of including each campus is that information about students from a very diverse group of institutions was available.

A second advantage of using a small number of observations from each campus is that the burden of responding to the survey was not onerous. With the exception of four large campuses, each financial aid office was asked to complete surveys on 10 students.

Financial Aid Directors Did Not Have to Draw the Sample

The sample was drawn by Coordinating Board staff. This approach minimized the type of errors that occur when samples are drawn incorrectly.

A second advantage was that when a student had to be replaced in the sample the reason for replacement was known. If a student did not attend the institution, the financial aid director was to return that label to the Coordinating Board. If a student dropped out before the tenth day of the term, the financial aid director was to return that label also.

Data Collection

The questionnaire was developed with input from an advisory committee. The Advisory Committee helped Coordinating Board staff determine what information was available on the campuses. Some desired information was not available in accurate and consistent form and this was known early in the process of developing the data base.

The questionnaire was designed to accommodate the diversity of institutions in the state. Although this made the questionnaire several pages longer, it allowed financial aid directors to report the data the way they keep it. Institutions that do not use credits, for example, were able to report the number of clock hours a student attended.

There were some disadvantages to this collection process. First, the package of survey materials arrived in a very large, thick envelope that was somewhat intimidating. When they first looked at it, a number of financial aid directors thought that it would take a great deal of time to fill out such a large amount of paper. Many of these people delayed completion of the surveys but were pleasantly surprised to discover how quickly the questionnaires could be completed.

Second, the information obtained about student budgets is not what students spend but are allowances specified by the institutions.

Third, information about student earnings from off-campus jobs was not available. Based on a 1985 Minnesota Higher Education Coordinating Board study, Setter and Schoenecker reported that 54 to 84 percent of all student jobs were off-campus depending on the type of institution attended.[3] While off-campus earnings are a major source of money to cover the cost of attendance, the specific amounts and their distribution among students with different characteristics is unknown.

Survey Follow-Up

Ninety-eight percent of the financial aid directors in the survey completed all of the survey materials and returned them to the Coordinating Board. There were several factors that contributed to the high response rate.

First, the survey was done by the agency that determines whether an institution's students are eligible for state grants. While survey materials did not threaten financial aid directors with loss of aid if they did not respond, financial aid directors are accustomed to being required to complete reports for the agency.

Second, the instructions on completing the sample required a limited initial response. Financial aid directors were asked to determine whether the students on their sample roster had attended and return the labels for students who did not attend. Financial aid directors were also asked to return the student labels remaining after they had found the first ten students on their roster who attended the institution. The Coordinating Board had an early indication of financial aid directors who needed additional reminders or assistance in responding.

Third, financial aid directors who had not returned all of the survey materials were contacted every two weeks. The repeated contacts convinced financial aid directors that the Coordinating Board was seriously interested in obtaining their responses and would persist in contacting them until the responses were received.

Fourth, after ten weeks, financial aid directors were contacted by their colleagues who were members of the Advisory Committee. Advisory Committee members had completed the surveys for students at their institutions and could attest that the surveys could be completed fairly quickly. Advisory Committee members also volunteered to answer questions about how to complete the surveys.

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[3] Gerald Setter amd Craig Schoenecker, "Student Employment Patterns and the Role of Earnings in Financing the Cost of Attendance," Fourth Annual Student Financial Aid NASSGP/NCHELP Research Network Conference on Student Financial Aid Research. Proceedings, Volume II, New York State Higher Education Services Corporation, 1987.

The main disadvantage to the follow-up process was the time required to track responses and send the appropriate follow-up letters. Financial aid directors were asked to return three different forms with unused student labels, an institutional questionnaire, and ten student questionnaires. Many financial aid directors returned some, but not all of these materials in their first response. Follow-up letters to these financial aid directors had to acknowledge the materials already received and specifically identify the additional materials needed.

Summary

Overall the pilot test of the survey was successful. Useful data were obtained and the burden of responding to the survey was manageable.

V. Summary

The concept of collecting data about a sample of State Scholarship and Grant Program applicants is feasible based on the experience reported in this paper. Collecting data from all institutions resulted in a data base representing the full range of Minnesota students. Collecting a few observations from each institution helped achieve a 98 percent response rate.

The Minnesota State Scholarship and Grant Program uses a standard living and miscellaneous expense allowance for all applicants. This allowance is intended to cover expenses incurred by the student during the period of attendance. Based on the results of the survey, the allowance used by the State Scholarship and Grant Program is considerably lower than those specified by the institution.

The Minnesota State Scholarship and Grant Program assumes that each student will cover 50 percent of the cost of attendance. The results of this study suggest that this is consistent with institutional and financial aid policies and practices in Minnesota.

CHARACTERISTICS OF STAFFORD LOAN PROGRAM DEFAULTERS: A NATIONAL STUDY

Background

The Stafford Loan Program (formerly the Guaranteed Student Loan Program) has undergone ever closer scrutiny during recent years due to escalating borrower default costs. During Fiscal Year (FY) 1988 approximately $1.4 billion in default claims were paid by the U.S. Department of Education; as recently as FY 1982 annual default claim costs were less than $300 million. The steep rise in default costs is principally due to the dramatic growth in the program rather than the higher proportion of high risk borrowers.

Nevertheless, as default costs increase, it is only natural that more interest is focused on the characteristics of individual borrowers who default. A number of questions have surfaced: Are there identifiable characteristics that sharply differentiate program defaulters from non-defaulters? What is the relative importance of these characteristics and how are they interrelated? Does knowledge of these characteristics significantly improve our ability to predict who will default? How might knowledge of the characteristics associated with default be translated into specific default reduction policies?

Consequently, a number of research studies have emerged. Most have dealt almost exclusively with the first question, i.e., what characteristics are correlated with default. Few studies have addressed a national population; most are based on state or local samples -- a notable exception is the recently published U.S. General Accounting Office report (U.S. General Accounting Office, 1988) hereafter referred to as the GAO Report. Also, few studies have been able to document the employment history of borrowers, a potentially critical explanatory variable, but have been forced to rely solely on variables that appear on state guarantee agency borrower files, such as type of institution, adjusted gross income, and independent/dependent status. Such are the constraints imposed on the current study. Despite these drawbacks, these studies have produced some noteworthy findings.

Purposes of Study

This study, based on a nationally representative sample of Stafford borrowers, attempts to extend the frontiers of research that compare characteristics of defaulters and non-defaulters. The purpose of the study are as follows:

(1) Provide national cohort default rates for various borrower subpopulations.

(2) Examine the relationship between five independent or predictor variables (type of institution attended, adjusted gross income, independent/dependent status, years of schooling completed, enrollment status, i.e., graduated/withdrawn) and the dependent or predicted variable, default status (default/non-default).

(3) Examine the interrelationships between the independent variables and, through cross-tabulation procedures and a multiple regression techniques, assess the effects of each independent variable on default status when the effects of other variables are held constant (controlled).

(4) Determine how well the independent variables collectively account for variation in default status.

Methodology

A sample extract of 100,000 records randomly selected from the FY 1987 state guarantee agency cumulative borrower file maintained by the U.S. Department of Education was used as the data base. A cohort of 7,394 borrowers who took out their last loan during FY 1983 and had entered repayment by the end of FY 1987 was selected and subsequently divided into two groups: those who had defaulted and those who had not.

A separate file was created that equated school codes on the borrower file with one of five institutional type categories: public four year, private four year, public two year, private two year, and proprietary. The other four independent variables -- adjusted gross income, independent/dependent status, years of schooling completed, enrollment status (graduated/withdrawn) -- are data fields that appear on the borrower file. Default status (default/non-default), independent/dependent status, and enrollment status (graduated/withdrawn) were treated as dichotomous variables. The adjusted gross income variable measures borrower income for independent students and family income for dependent students. All income data pertain to date of loan application. Years of schooling completed was coded into ordered categories ranging from less than one year (freshman) to four years or more (graduate students).

The research design closely parallels the design of the recently published GAO Report. There are some significant differences: GAO delineated only three broad types of institutions, i.e., vocational, higher education, and other schools; GAO did not develop a measure of enrollment status; GAO reported results on the total population of borrowers who took out their last loans in FY 1983 rather than a random sample of borrowers; most importantly, the objective of the GAO Report was to provide concise and factual descriptive comparisons of the profiles of defaulters and non-defaulters without elaborate analytic interpretation.

It is not known to what extent the quality of the data reported by the state guarantee agencies could affect the findings reported here. The data have not been verified for accuracy. While data are virtually complete for default status, type of institution, and years of schooling completed, approximately 14 percent of the records have missing data on independent/dependent status, 16 percent on adjusted gross income, and 26 percent on enrollment status.

Cohort Default Rates

A cohort default rate, as distinguished from a cumulative or annual rate (see Hauptman and Smith, 1987 and Merisotis, 1988 for discussions of default rates) was employed in this study. The cohort consists of Stafford borrowers who took out their last loan during FY 1983 and had entered repayment by the end of FY 1987. All rates reported here are borrower rather than dollar rates. That is, rates are calculated from the percentage of borrowers who default as opposed to the percentage of dollars which default. While there are some advantages to employing default rates by dollar amount -- primarily they reflect more accurately the losses incurred through defaults -- the purposes of this study were better served by focusing on borrowers rather than dollars.

A cohort default rate by category for each of the five independent variables is shown in Table 1. Slightly more than 20 percent of all borrowers who took out their last loans in FY 1983 had defaulted by the end of FY 1987.

Relationships between Independent Variables and Default Status

As shown in Table 1, each of the five independent variables is correlated with default status. Approximately 37 percent of proprietary students and 27 percent of public two-year students default on their loans compared to just over ten percent for the four-year private and four-year public students. Income and years of schooling are inversely related to default: for example, students with incomes of $30,000 or more show a default rate of less than six percent, compared to a default rate of almost 32 percent for borrowers who make less than $5,000; upper division and graduate students experience default rates of less than ten percent while the freshman rate exceeds 33 percent. Approximately 29 percent of independent students default compared with 15 percent of dependent students. Borrowers who graduate from a program of study are less likely to default (16 percent) than those who withdraw (26 percent).

These findings corroborate results from a number of previous studies. However, in order to assess more precisely what role each of the independent variables plays in whether a borrower subsequently defaults, it is necessary to examine the interrelationships among variables. We will begin by evaluating the interrelationship between type of institution and adjusted gross income as it affects default rates.

Type of Institution and Adjusted Gross Income: Effects on Default Rates

Cohort default rates for the five institutional types listed in Table 1 are pictorially displayed in Figure 1. The proprietary school default rate (37.3 percent) is almost four times the rate for traditional four-year institutions. The default rate for the public two-year sector (26.6 percent) is two and one half times the rate for four-year institutions. The high rates for proprietary schools relative to traditional four-year institutions has been well documented (see, for example, Applied Management Sciences, 1986; California Student Aid

Commission, 1988; New Jersey Association of Student Financial Aid Administrators, 1988; Illinois State Scholarship Commission, 1988; U.S. General Accounting Office, 1988). Moreover, there is unanimous agreement that higher income borrowers are less likely to default (see California Student Aid Commission, 1988; New Jersey Association of Student Financial Aid Administrators, 1988; Davis, 1988a).

To what extent is the large disparity in default rates between traditional four-year institutions, on the one hand, and the proprietary and community college sectors, on the other, attributable to income differences? Since institutions with the highest default rates also tend to have higher percentages of low income borrowers, perhaps the default rate differences between institutions would vanish if income was held constant. This hypothesis is examined in Figure 2.

Figure 2 compares default rates for borrowers attending different types of institutions by income category. Two findings stand out: (1) for each type of institution an inverse relationship between income and default rate persists, i.e., as income increases the default rate decreases; (2) for each income category proprietary school default rates are highest, followed by the public two-year sector, and finally the four-year institutions. It is obvious that the type of institution attended affects the default rate even when income is taken into account. That is, income and type of institution attended independently affect the likelihood of default.

Adjusted Gross Income and Independent/Dependent Status: Effects on Default Rates

Adjusted gross income and independent/dependent status are highly correlated. This relationship is displayed in Figure 3: almost 75 percent of borrowers who earn less than $5,000 are independent students while borrowers at the other end of the income spectrum, family incomes of $30,000 and above, are overwhelming dependent students (approximately 95 percent). While a number of studies have alluded to the much higher default rates of independent students and the close interplay of independent/dependent status with income, few studies have attempted to isolate the effects of these two variables on default rates. Could it be that the effects on default rates customarily attributed to income are in large measure a function of a borrower's independent/dependent status?

Figure 4 addresses this question. It is readily apparent that a strong inverse relationship between income level and default rate persists even when the analysis is performed separately for independent and dependent borrowers. That is, income still has a significant effect on default rates even when independent/dependent status is controlled. However, the converse does not appear to be the case: the effects of independent/dependent status on default status tend to disappear when income is taken into account. The only qualification to this conclusion occurs among the lowest income grouping (less than $5,000) where independent borrowers show slightly higher default rates. Among all higher income groupings, default rate differences between independent and dependent borrowers are barely discernible.

The evidence presented here reveals that the effects of independent/dependent status on default status have been overstated by earlier studies due to a failure to control for income. Only in the lowest income categories are independent borrowers more inclined to default, and even then the differences are small. The GAO Report attempted to control for income in assessing the effects of independent/dependent status on likelihood of default, but employed overly large income groupings. This procedure did not control effectively for income and failed to detect the fact that default rate differences between dependent and independent borrowers become insignificant when income is taken into account.

Years of Schooling and Type of Institution: Effects on Default Rates

Numerous studies have documented the association between years of schooling completed and likelihood of default. All these studies show -- consistent with the findings in Table 1 -- freshman with the highest default rates and graduate students with the lowest default rates (see California Student Aid Commission, 1988; New Jersey Association of Student Financial Aid Administrators, 1988; Davis, 1988b; U.S. General Accounting Office, 1988).

Does years of schooling completed have a significant effect on default rates when type of institution is taken into account? One could argue that, since the institutions with the highest default rates (the proprietary schools and public two-year schools) consist almost exclusively of freshman and sophomores, the inverse relationship between years of schooling and default status in the total sample may be a function of type of institution. That is, the effects of years of schooling on default status may tend to vanish once we control for type of institution, much in the same way the effects of independent/dependent status disappeared once income was introduced as a control variable.

But, as attested to by Figure 5, such is not the case. For example, among proprietary school borrowers, approximately 41 percent of borrowers with less than one year of postsecondary education default compared to just 24 percent of those who have completed between one and two years of school. The corresponding percentages for the public two-year sector freshman and sophomores are 32 and 23 percent, respectively. The same types of trends, albeit not as spectacular, are visable for the four-year sectors: among private institutions approximately 18 percent of freshman default compared to six percent for borrowers who have completed four years of college; among public four-year institutions the corresponding percentages are 17 and eight.

These data clearly show that years of schooling has an independent effect on default status irrespective of the institution attended. Also, default rates for different types of institutions continue to follow the familiar pattern when years of schooling is controlled: proprietary and public two-year institutions show substantially higher rates than four-year institutions for freshman and sophomore borrowers separately.

Enrollment Status and Type of Institution: Effects on Default Rates

Does graduation from a program of study significantly reduce the likelihood that a borrower will default? There has been less attention paid in the literature to this variable than to income, independent/dependent status, type of institution, and years of schooling. The default rate difference between those who graduate and those who withdraw is surprisingly small; as seen from Table 1, approximately 25 percent of those who withdraw subsequently default compared to 16 percent of those who graduate.

The interpretation of this variable is somewhat ambiguous. "Withdrawal" should not be equated with "dropout." A record coded as "withdrawal" on a state guarantee agency file simply means that the borrower had withdrawn from the institution where the last loan was disbursed. The same borrower could have subsequently attended another institution and graduated. This may partially explain the modest default rate differences found between the two groups.

Figure 6 displays default rates for the two groups for different types of institutions. For the largest institutional sector -- the public four-year institutions -- the percentage of withdrawals who default (13.3 percent) is not much larger than the percentage of graduates who default (8.5 percent). For the other types of institutions the differences are more pronounced. For example, among private four-year institution borrowers 18 percent of withdrawals default compared to just six percent of graduates; the corresponding percentages for the private two-year sector are 31 and 14, for the public two year, 31 and 21, and for the proprietary, 47 and 30.

Davis' research with Pennsylvania proprietary school borrowers showed sharp differences in default rates between graduates and dropouts (Davis, 1988c). His default rate for graduates is much lower than the rate reported here. Indeed, one of the most striking items in Figure 6 is the 30 percent default rate for borrowers who successfully complete proprietary programs, a figure that easily exceeds the overall percentage of withdrawals who default.

Multiple Regression Analysis

A statistical technique to determine the relative influence of the five independent variables on default status is multiple regression analysis. A standardized regression weight, i.e., a beta weight, is mathematically computed for each of the five independent variables. The weight for a given variable can be interpreted as the standardized effect of that variable on default status when all other independent variables are simultaneously controlled. Multiple regression analysis also permits an estimate of the total variation in the dependent variable (default status) that is accounted for by the collective impact of the independent variables. This estimate is called the coefficient of determination. It determines how accurately individual values for the dependent variable (whether or not a borrower defaults) can be predicted from knowledge of values on the independent variables.

Multiple regression analysis does require the use of continuous variables or, at the very least, dichotomous variables that approximate a 50:50 split. The variables defined in this study do not fully meet these requirements. Keeping this caveat in mind, the regression analysis was performed to provide suggestive answers to some of the questions raised earlier.

The dependent variable, default status, was coded as either "0" (non-default) or "1" (default). Type of institution was dichotomized as "0" (proprietary institution) or "1" (all other institutions). Similarly, dependent borrowers were coded "0" and independent borrowers "1", while graduates were coded as "0", withdrawals as "1". Years of schooling and adjusted gross income were treated as continuous variables. Results are shown in Table 2.

From the standardized regression weights listed in Table 2, three variables appear to be about equally influential in predicting whether a borrower will default; adjusted gross income, years of schooling, and type of institution. Thus these three variable separately and independently affect default rates when all other variables are simultaneously controlled. Enrollment status (graduated/withdrawn) and independent/dependent status show much smaller effects, about half as large as the three primary independent variables.

The regression analysis also suggests that the independent variables collectively explain only a small proportion of the variation in default status (approximately 13.6 percent). This means that knowledge of borrower profiles on the independent variables does not ensure consistently accurate estimates of whether these borrowers default. This is due to the fact the overwhelming percentage of borrowers pay back their loans and even in the highest risk segments of the borrower population (e.g., proprietary school, freshman, low income, withdrawal) at least 50 percent will pay back their loans. Thus no combination of characteristics studied here is found exclusively among defaulters.

Future Studies

The borrower characteristics discussed here, with the exception of enrollment status, are attributes of the borrower at the time the last loan was disbursed. Yet years may elapse between the date of the last loan and subsequent default on the loan. It is imperative then that measures of borrower characteristics are timely, that they reflect borrower characteristics at the time of repayment or default. One of the obvious candidates is employment status. Results from the National Postsecondary Student Aid Study should provide a rich source of variables for future studies. Imaginative use of these variables could significantly improve predictive power.

Prepared by:

Gary F. Beanblossom, Chief	Blanca Rosa Rodriquez, Program Analyst
Stafford Loan Program	Stafford Loan Program
Analysis Section	Analysis Section
OPE/OSFA/DPPD	OPE/OSFA/DPPD

Table 1

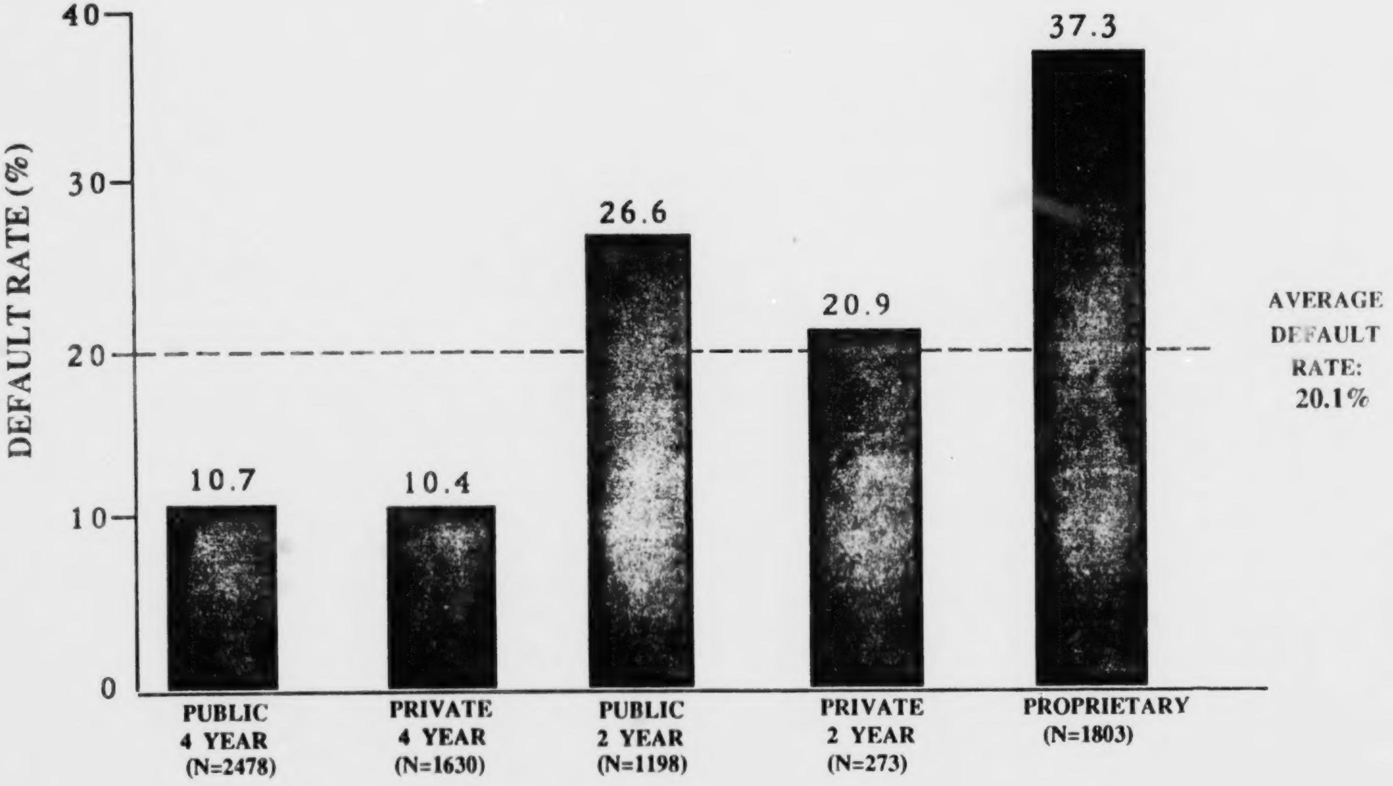
COHORT DEFAULT RATES BY SELECTED CHARACTERISTICS FOR SAMPLE OF FY 1983 STAFFORD BORROWERS

TYPE OF INSTITUTION	Default Rate (%)	N
Public 4 Year	10.7	2,478
Private 4 Year	10.4	1,630
Public 2 Year	26.6	1,198
Private 2 Year	20.9	273
Proprietary	37.3	1,803
ADJUSTED GROSS INCOME		
$1 -$4,999	31.5	1,158
$5,000 -$9,999	28.4	927
$10,000-$14,999	22.4	830
$15,000-$19,999	16.9	649
$20,000-$24,999	11.7	615
$25,000-$29,999	8.5	625
$30,000 +	5.8	1,405
INDEPENDENT/ DEPENDENT STATUS		
Independent	28.6	2,527
Dependent	15.3	3,804
YEARS OF SCHOOLING		
Less than 1 year	33.1	2,881
1 year but less than 2	17.8	1,161
2 years but less than 3	12.1	802
3 years but less than 4	8.9	1,389
4 years or more	8.2	1,065
ENROLLMENT STATUS		
Graduated	15.5	3,030
Withdrawn	25.9	2,438
TOTAL SAMPLE	**20.1**	**7,394**

Source: Data were obtained from a random sample of 7,394 Stafford borrowers who took out their last loan during FY 1983 and had entered repayment by 9/30/87. The sample was drawn from the FY 1987 guarantee agency Stafford Tape Dump sample extract, U.S. Department of Education, OPE/OFSA/DPPD, Stafford Loan Branch, Analysis Section. Default rates are borrower rates, not dollar rates. N represents the number of cases from which default rates were calculated.

Figure 1

DEFAULT RATES BY TYPE OF INSTITUTION
FOR SAMPLE OF FY 1983 STAFFORD BORROWERS



Source: Data were obtained from a random sample of 7,382 Stafford borrowers who took out their last loan during FY 1983 and had entered repayment by 9/30/87. The sample was drawn from the FY 1987 guarantee agency Stafford Tape Dump sample extract, U.S. Department of Education, OPE/OSFA/DPPD, Stafford Loan Branch, Analysis Section.

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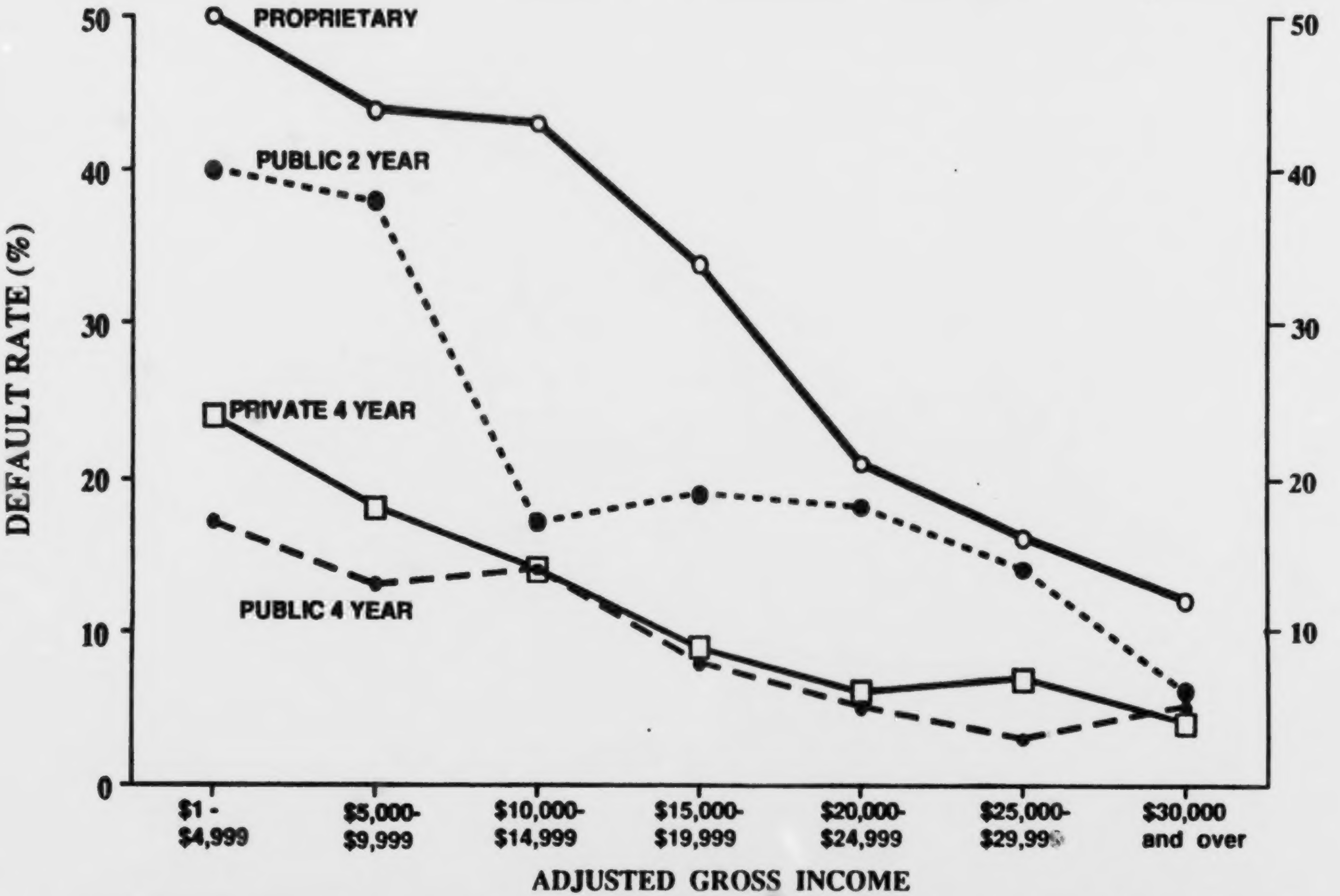
Figure 2

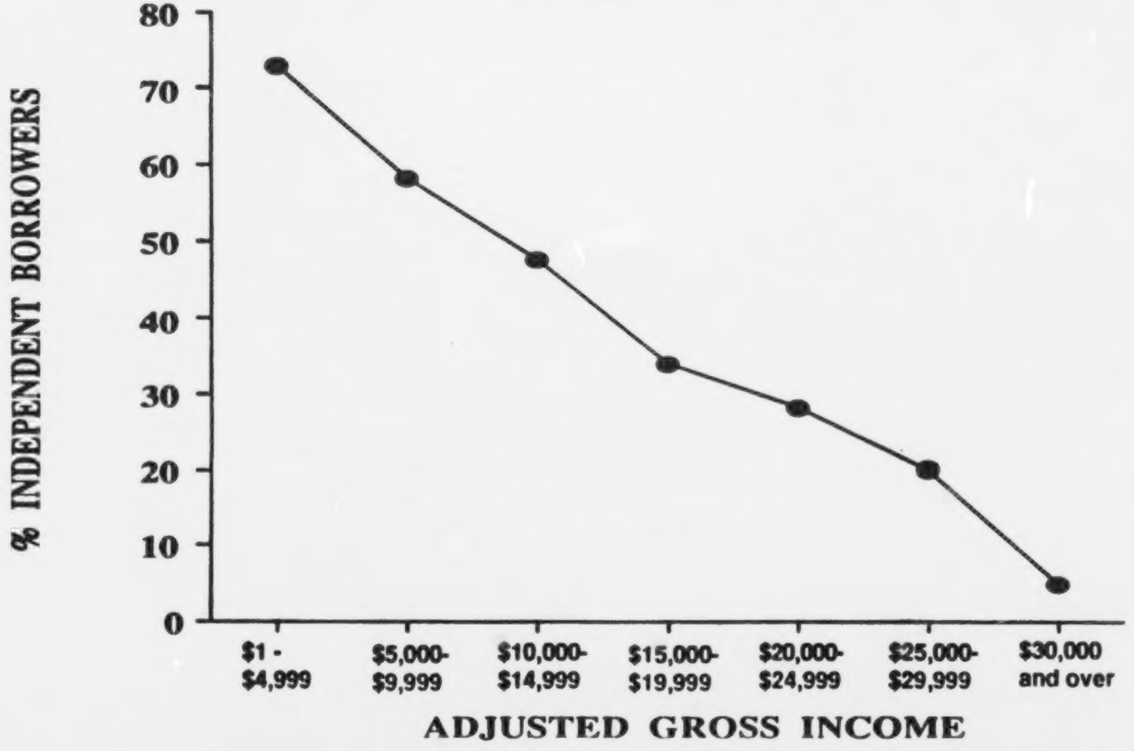
DEFAULT RATES BY TYPE OF INSTITUTION AND ADJUSTED GROSS INCOME FOR SAMPLE OF FY 1983 BORROWERS



Source: Data were obtained from a random sample of 6,202 Stafford borrowers who took out their last loan during FY 1983 and had entered repayment by 9/30/87. The sample was drawn from the FY 1987 guarantee agency Stafford Tape Dump sample extract, U.S. Department of Education, OPE/OFSA/DPPD, Stafford Loan Branch, Analysis Section.

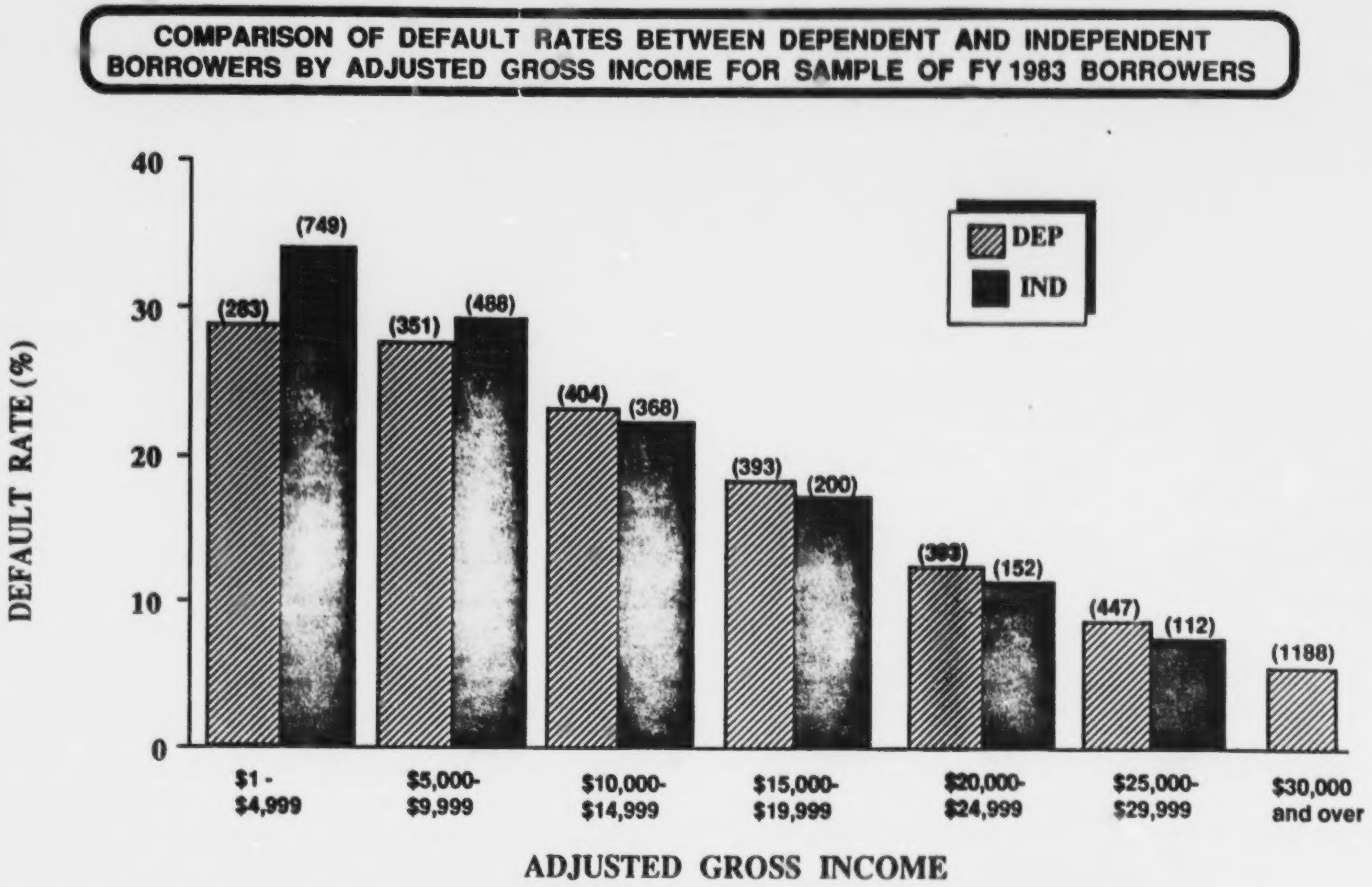
Figure 3

PERCENTAGE OF INDEPENDENT BORROWERS BY ADJUSTED GROSS INCOME FOR SAMPLE OF FY 1983 STAFFORD BORROWERS



Source: Data were obtained from a random sample of 5,591 Stafford borrowers who took out their last loan during FY 1983 and had entered repayment by 9/30/87. The sample was drawn from the FY 1987guarantee agency Stafford Tape Dump sample extract, U.S. Department of Education, OPE/OFSA/DPPD, Stafford Loan Branch, Analysis Section.

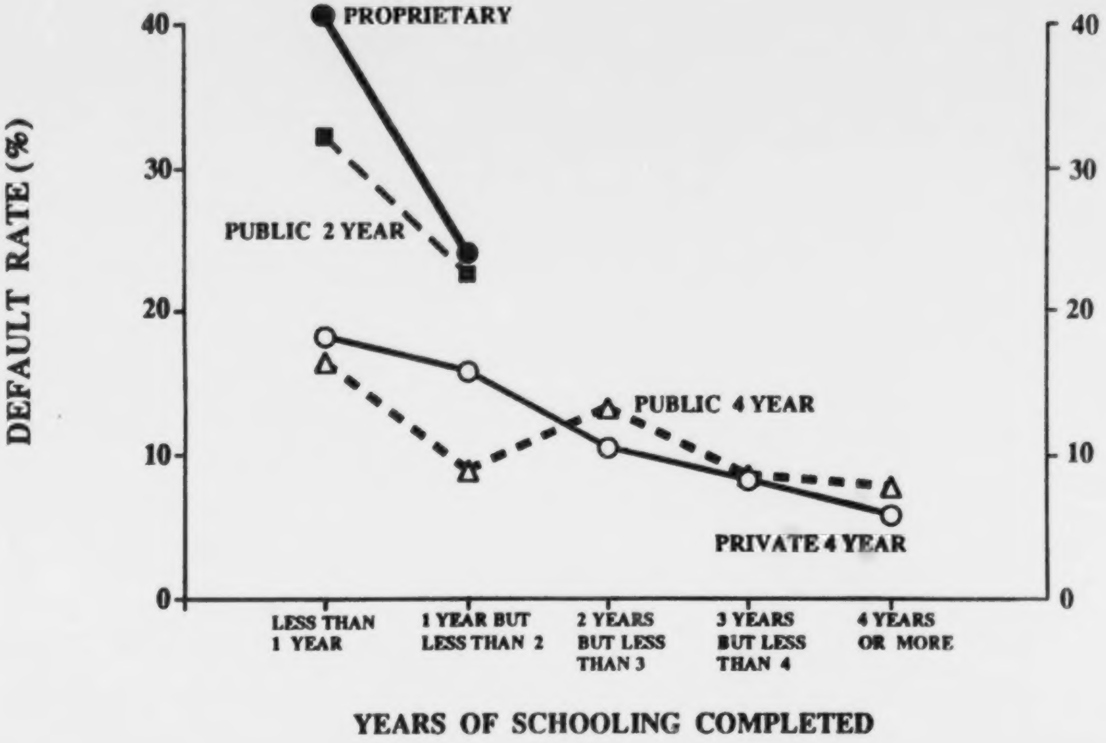
Figure 4



Source: Data were obtained from a random sample of 5,591 Stafford borrowers who took out their last loan during FY 1983 and had entered repayment by 9/30/87. The number of cases for which default rates were calculated for each category are shown in parentheses above each bar. Default rates were not calculated for independent borrowers with incomes of $30,000 or greater due to a small number of cases. The sample was drawn from the FY 1987 guarantee agency Stafford Tape Dump sample extract, U.S. Department of Education, OPE/OFSA/DPPD, Stafford Loan Branch, Analysis Section.

Figure 5

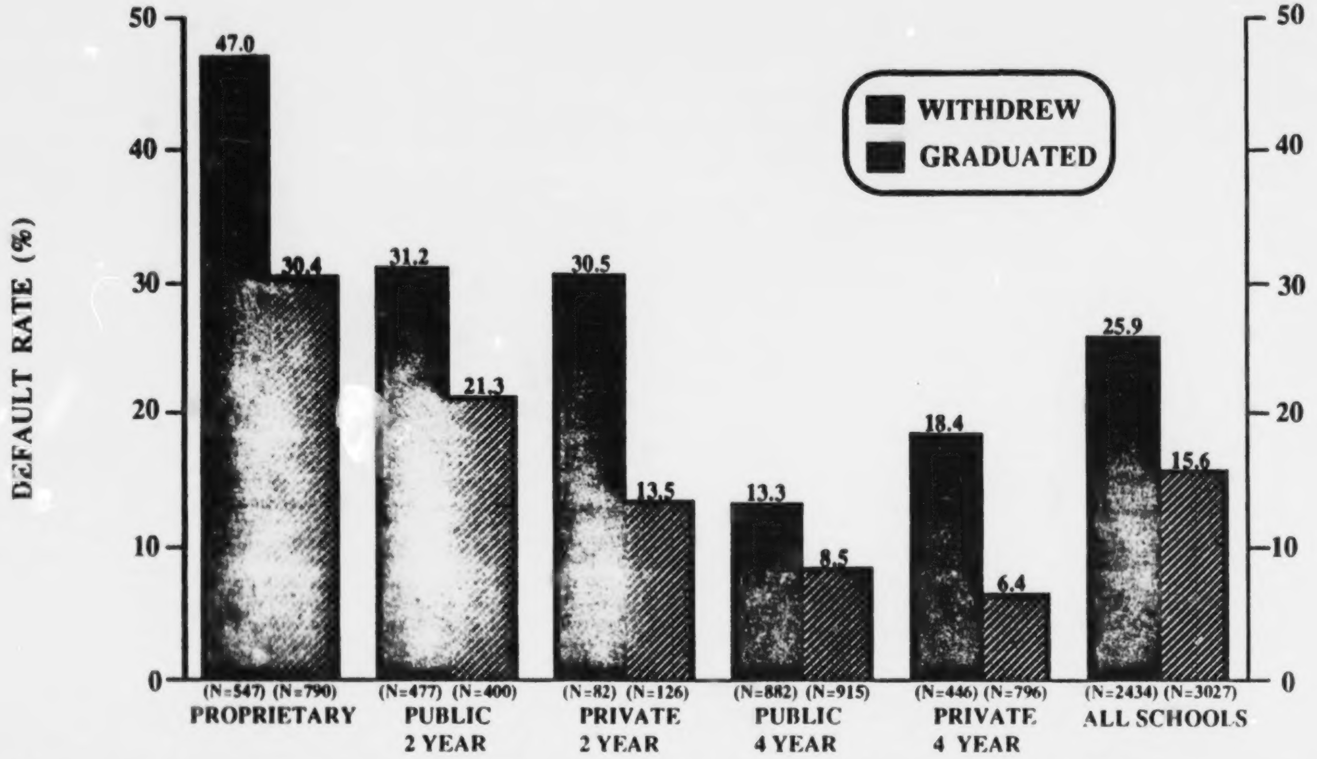
COMPARISON OF DEFAULT RATES BY YEARS OF SCHOOL COMPLETED AND SCHOOL TYPE FOR SAMPLE OF FY 1983 STAFFORD BORROWERS



SOURCE: Data were obtained from a random sample of 6,912 Stafford borrowers who took out their last loan during FY 1983 and had entered repayment by 9/30/87. Sample sizes for years of schooling were: less than one year= 2,877; one year but less than two= 1,161; two years but less than three= 683; three years but less than four= 1,287; four years or more= 913. Two year private schools were not plotted due to a small number of cases. The sample was drawn from the FY 1987 guarantee agency Stafford Tape Dump sample extract, U. S. Department of Education, OPE/OSFA/DPPD, Stafford Loan Branch, Analysis Section.

Figure 6

COMPARISON OF DEFAULT RATES BETWEEN BORROWERS WHO SUBSEQUENTLY GRADUATED OR WITHDREW--- BY SCHOOL TYPE-- FOR SAMPLE OF FY 1983 STAFFORD BORROWERS



SOURCE: Data were obtained from a random sample of 5,461 Stafford borrowers who took out their last loan during FY 1983, had entered repayment by 9/30/87, and whose enrollment status was known. The sample was drawn from the FY 1987 guarantee agency Tape Dump sample extract, U.S. Department of Education, OPE/OFSA/DPPD, Stafford Loan Branch, Analysis Section.

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Table 2

REGRESSION OF DEFAULT STATUS ON SELECTED INDEPENDENT VARIABLES FOR SAMPLE OF 1983 BORROWERS

Variable	Beta Weight	N
Adjusted Gross Income	-.163	6,209
Years of Schooling	-.158	7,367
Non-Proprietary Institution	-.152	7,382
Withdrawn	.086	5,468
Independent Borrower	.070	6,331

Multiple Correlation (R)	.370
Coefficient of Determination (R^2)	.136

Source: Data were obtained from a random sample of 7,394 Stafford borrowers who took out their last loan during FY 1983 and had entered repayment by 9/30/87. The sample was drawn from the FY 1987 guarantee agency Stafford Tape Dump sample extract, U.S. Department of Education, OPE/OFSA/DPPD, Stafford Loan Branch, Analysis Section. Default rates are borrower rates, not dollar rates. N represents the number of cases from which default rates were calculated. For purposes of the regression analysis, the dependent variable default status, was coded as either "0" (non-default) or "1" (default).

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Student Borrowers and Education Debt Burdens

by

Laura L. Greene
Research Associate
Pennsylvania Higher Education Assistance Agency

This presentation concerns the first half of a two-part study currently underway at PHEAA. We are examining a group of borrowers whose Stafford loans came due for repayment between September 1, 1988 and June 30, 1989. Part 1 of the study involves the results of a survey of a stratified random sample of these borrowers. It is a descriptive analysis of the situation facing Stafford borrowers who recently finished their education and are beginning or nearing repayment of their education loans. This portion of the study is complete. Part 2 of the study will be conducted within the next year and will examine the members of this sample who default, identifying the characteristics of these individuals and comparing their characteristics to those of borrowers who repay their education loans in a timely manner.

Once the appropriate population of Stafford borrowers was identified by the borrowers' last date of enrollment, it was stratified by institution type and number of attendance years. Six types of institutions were identified: four-year private colleges, four-year public colleges, two-year colleges, nursing schools, vocational/technical schools, and proprietary schools. The survey was conducted in January of this year. 6,413 individuals received surveys and their response rate was 35 percent.

Survey respondents indicated their current activities by choosing one or more of the survey instrument's eight activity categories. CHART 1 shows these eight choices and the percent of respondents participating in each category. Over 85 percent of the survey respondents were working--70 percent full-time and 17 percent part-time. Slightly more than one percent of the respondents were serving in the military, and 4 percent were homemakers who were not currently seeking a job. About 6 percent were enrolled less than half-time in a postsecondary program, 3.6 percent graduate and 2.6 percent undergraduate. About 21 percent of the respondents were seeking employment; however, some of these were holding one job while seeking another. After adjusting for the borrowers in this group who were employed, the borrowers' unemployment rate was 11.1 percent, more than double the seasonally-adjusted unemployment rate in Pennsylvania during the same period of 4.3 percent.

This is a disturbing statistic. Studies at PHEAA and elsewhere have shown that the primary reason borrowers default is their lack of a job, or their lack of sufficient income to make loan payments. The high unemployment rate of the survey respondents may be largely attributable to the individuals most recently out of school with the beginning of their repayment obligation still three months in the future. However, if this is the case, these borrowers still have only a short time to find employment and become financially settled before beginning student loan payments. There is cause to expect a relatively high default rate among the surveyed borrowers who were unemployed.

In regard to employment and type of institution attended, respondents who had attended four-year private institutions or nursing schools were more likely to be working full-time, 82 percent versus 63 percent, while those who had attended four-year public institutions, vo-tech schools, or proprietary schools were more likely to be seeking full-time employment, 24 percent versus 11 percent.

Male respondents were more likely either to have a full-time job or to be seeking full-time employment, while female respondents were more likely to be employed part-time or to be seeking part-time employment. Although only four percent of the respondents were homemakers, female respondents were 5 times more likely to be homemakers than male respondents.

About 70 percent of the survey respondents were employed full-time, either in civilian jobs or by the military. Of these respondents, about 16 percent were employed in clerical occupations, and 14 percent were employed in the occupation category of nurses, pharmacists, dietitians, therapists and physicians' assistants. Almost 10 percent were employed in executive, administrative, and managerial occupations, 7 percent were health-diagnosing and treating practitioners, 7 percent were in marketing and sales, and 6 percent were engineers and architects.

It is interesting that, of the six most common occupation categories, two are dominated by females and three were dominated by males. There was not a significant gender difference in the respondents who were employed in marketing and sales. Almost half of the female respondents, 45 percent, were employed either in clerical occupations, or as nurses, pharmacists, dietitians, therapists and physicians' assistants. Conversely, 38 percent of the male respondents were either engineers and architects; executives, administrators, and managers; or health-diagnosing and treating practitioners.

The median salary of respondents who were employed full-time was $17,967. Over one-fourth of the respondents earned less than $12,000 per year, while 13.8 percent earned more than $27,000 per year.

Median Incomes of Respondents

	N	Median Income
All Respondents Employed Full-time	1,488	$17,967
Married Respondents Employed Full-time	343	$20,999
Combined Income-Respondents Employed Full-time & Spouses	328	$32,759

About 15 percent of the respondents were married and employed employed full-time. The median income for this group was $20,999, 17 percent higher than the median income of all single respondents who were employed full-time. The median combined income of the respondents and their spouses was $32,759.

The median income of White respondents was 87 percent higher than that of Black respondents, and 22 percent less than the median income of respondents from other ethnic groups. The low income of Black respondents is largely due to the fact that they were less likely to be employed full-time and more likely to be seeking a job.

Past research has shown that students who complete their program of study are more likely to repay their education loans. Specifically, a PHEAA study of loan default conducted in the fall of 1988 found a strong positive relationship between a borrower's completion of his or her education program and the probability that he or she will repay the loan. The vast majority of the survey respondents in this study, 83 percent, indicated that they had completed the postsecondary program in which they were enrolled at the time of their last PHEAA guaranteed loan.

Since program completion has been found to be such a strong indicator of loan repayment, the characteristics which identify these two groups of borrowers become very important. Completion rates differed significantly by race. The completion rate of Black respondents was 69 percent, significantly less than that of White respondents, or respondents from Other ethnic groups, whose completion rates were 83 percent and 86 percent respectively.

The current income reported by respondents who completed their postsecondary programs showed no distinct pattern; they were fairly constant across each income range. However, the respondents who did not complete their postsecondary programs were much more likely to have an income at the low end of the scale. About 70 percent of the respondents who did not complete their postsecondary program had incomes below $12,000, and 23.8 percent of them had incomes below $3,000.

Respondents' completion rates also varied by their major area of study. The highest completion rates were found in architecture and engineering, law, and health professions, each about 91 percent. Other two-year majors and other four-year majors had the lowest completion rates of 67 percent and 50 percent respectively. These two categories contained a large portion of respondents who were indecisive about their major area of study, that is, students in other majors were generally undecided. Thus, the lowest completion rates were found in categories of majors in which students did not seem to have solid future goals and thus appear to have been less committed to using their education for a specific purpose.

The respondents who indicated that they did not complete their education were asked to indicate the most important reasons for the termination of their postsecondary program. Insuffecent financial resources was the reason most often given by respondents. Other significant reasons for terminating their education programs were indecision about a career or major, work demands that conflicted with school, dissatisfaction with the college or school they were attending, and conflicting family obligations.

Their reasons for failing to complete their programs were somewhat influenced by the respondents' dependency status at the time of their loan. Respondents who were financially dependent were more likely to have experienced indecision about their career or major, 33 percent versus 11 percent, or to have had grades which were too poor to allow them to continue in their program, 15 percent versus 7 percent. Respondents who were independent were more likely to have had work demands that conflicted with school, 33 percent versus 16 percent, and were likely to have experienced conflicting family obligations, 33 percent versus 12 percent.

Survey respondents had an average Stafford debt of $6,951. Respondents who borrowed only from the Stafford program averaged $5,515. However, not only did those who borrowed from other programs have a higher average Stafford debt of $10,196, they had loans from other sources averaging $8,850. This $8,850 is misleading, because the range of other loan amounts is very large, $113 to $92,000. Thus, a more accurate statistic is the median amount borrowed from other sources of $3,000. Of the respondents who borrowed from other sources: average Perkins debt was $3,167, average SLS debt was $3,363, average HEAL debt was $27,835, average HPSL debt was $5,690, and the average debt from other education loan programs was $4,336. One out of six respondents borrowed from family members, with an average debt to family members of $7,460.

One-fourth of the married respondents had spouses with education loans that averaged $10,368. Total cumulative debt for these couples averaged $31,714.

Average Loan Amounts

	Number of Borrowers	Average Loan Amt.	Minimum Loan Amt.	Maximum Loan Amt.
Stafford Loan:				
All Respondents	2,257	$6,951	$250	$37,352
Only Stafford	1,565	5,515	250	35,000
Multiple Loans	692	10,196	884	37,352
Perkins Loan	368	3,167	250	25,000
SLS	147	3,363	250	20,000
HEAL	72	27,835	2,000	80,000
HPSL	58	5,690	250	41,000
Other Loan	275	4,336	113	44,000
Relative Loan	372	7,460	200	150,000
Spouse Loan	130	10,368	625	85,000

Since the Stafford Program is so large, I think there is a tendency to overlook the fact that students also borrow from other sources. A significant number of individuals responding to this survey have multiple loans with high balances.

The next Table contains the percentage of annual income which must be available for education loan repayment. Individuals in the highest income category spent the lowest portion of their income, 6.5 percent, on education loan repayment. For all individuals earning at least $6,000 per year, the portion of their annual income required to service their education loans fluctuated between 6.5 percent and 13.5 percent. Past research which has attempted to estimate manageable debt levels for student borrowers has reached no definitive conclusions concerning the level of borrowing which can be termed "excessive." However, manageable debt has been broadly defined as that requiring between 3 percent and 15 percent of the borrower's pre-taxed income. When judged by this criteria, respondents with incomes of $6,000 or more had manageable debt levels on average.

Annual Debt Burden of Respondents

Income Interval	No.	Weighted Avg Annual Debt	Debt as Pct. Of Income
$0 to $2,999	270	$ 1,032	68.8%
$3,000 to $5,999	236	871	19.4
$6,000 to $8,999	219	1,015	13.5
$9,000 to $11,999	243	909	8.7
$12,000 to $14,999	207	1,259	9.3
$15,000 to $17,999	198	1,216	7.4
$18,000 to $20,999	227	1,669	8.6
$21,000 to $23,999	188	2,310	10.3
$24,000 to $26,999	141	2,098	8.2
$27,000 and Above	211	1,944	6.5
All Incomes	2,140	$1,378	17.8
Above $6,000	1,634	$ 1,508	9.1

This is not the case for borrowers whose incomes were less than $6,000 per year. For respondents whose annual incomes were between $3,000 and $6,000, 19.4 percent of their annual income was required to make payments on education loans. Respondents earning less than $3,000 per year owed 68.8 percent of their annual income to educational lenders--either colleges, relatives or financial institutions.

This Table contains data concerning the 583 respondents, 25.8 percent of the sample, who had debt burdens of at least 15 percent. Some income categories were combined to retain a significant response rate. All of the respondents who earned less than $3,000 were included in this group. Almost 40 percent of those who earned between $3,000 and $5,999--and 33 percent of those who earned between $6,000 and $8,999--were required to forfeit at least 15 percent of their income to the repayment of education debt. The portion of respondents included in that table who earned over $9,000 was much smaller, between 9 percent and 13 percent of the respondents who earned over $9,000 had a debt burden of 15 percent or more.

There has been speculation among financial aid researchers that married persons who both have student loans face an even greater repayment burden. Thus, married respondents who indicated that their spouse also had a student loan were analyzed. The weighted average salary for this group was $30,700, and the average loan payment was $3,800. Thus, 12.5 percent of the combined household income was required to fulfill payment obligations on the households' education loans. About 41 percent of these families required at least 10 percent of their combined incomes, and about 30 percent required at least 15 percent of their combined incomes, to fulfill debt repayment.

As I mentioned earlier, the second part of this study, concerning defaulters, is not complete. However, some preliminary statistics are available on borrowers who are or have been delinquent on their payments. In order to achieve significant numbers of borrowers who have already been delinquent, the study population of Stafford borrowers was considered, not just the survey respondents. As of May 25, about 5.5 percent of the study population of Stafford borrowers whose loans were due are or have been delinquent. Significant differences were found between borrowers in good standing and those who are delinquent when we considered institution type and dependency status.

Three institution types were considered, four-year colleges, two-year colleges, and vo-tech and proprietary schools. Institutions were grouped by similar characteristics. Half of the borrowers in good standing, but only 43 percent of those who were delinquent, attended four-year colleges. Borrowers who attended two-year colleges made up 5 percent of those in good standing and 8 percent of the delinquencies. Borrowers who attended either vo-tech or proprietary schools made up 45 percent of the borrowers in good standing and 49 percent of those who are delinquent. Thus, borrowers who attended two-year colleges, vo-tech schools, or proprietary schools were more likely to become delinquent than those were who attended four-year colleges.

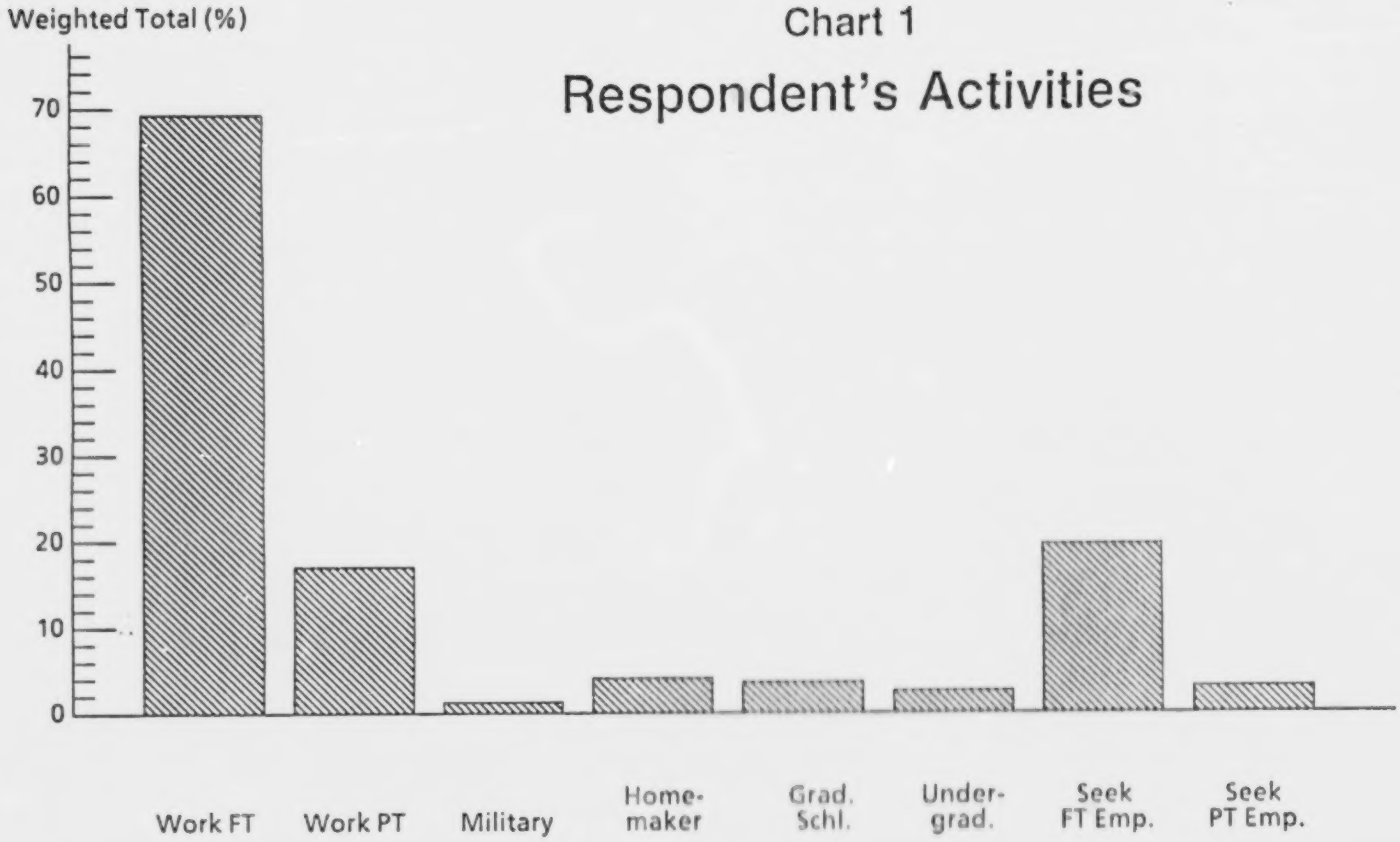
Dependent borrowers were much less likely to become delinquent than independent borrowers. Borrowers in good standing were approximately equally divided between those who were dependent and those who were independent at the time of their Stafford loans. However, 29 percent of the delinquencies are dependent and 71 percent are independent.

These statistics are far from conclusive, since the entire population of borrowers is not yet in repayment; however, the full study of characteristics of defaulters will be analyzed using survey results later this year.

I thank you for your attention.

Chart 1

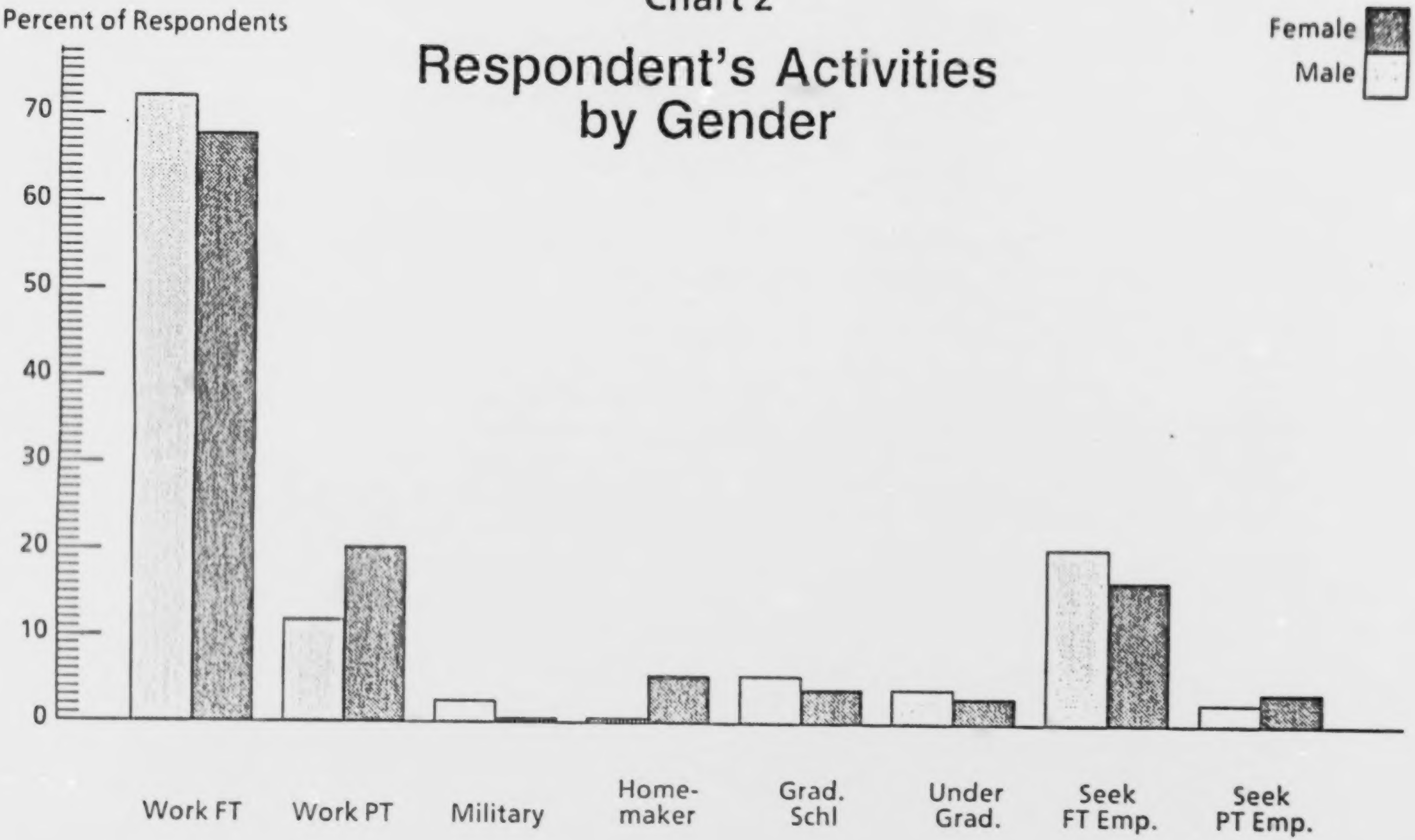
Respondent's Activities



Number of Responses 2,665

Chart 2

Respondent's Activities by Gender



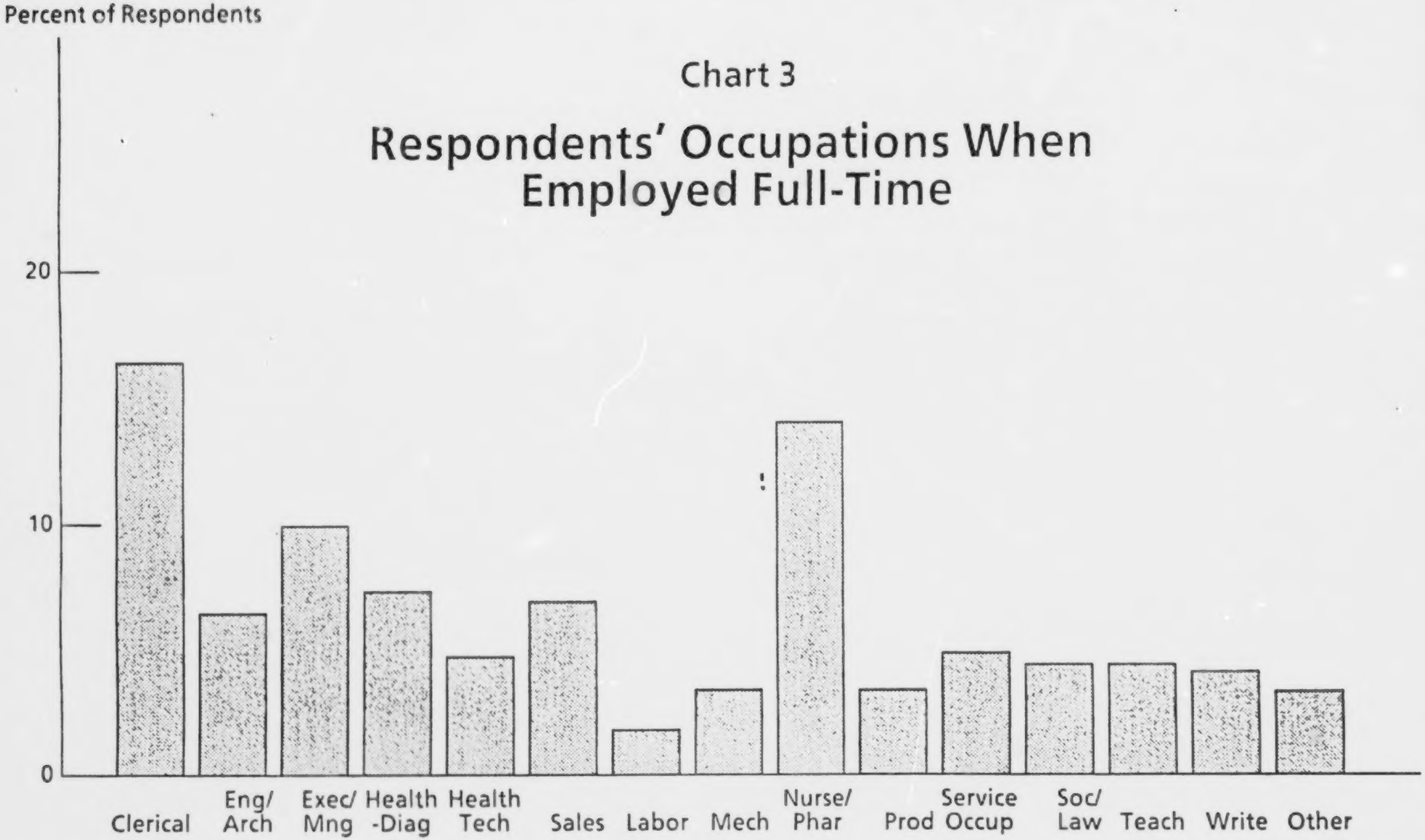


Chart 3

Respondents' Occupations When Employed Full-Time

Chart 4

Program Completion by Ethnic Group

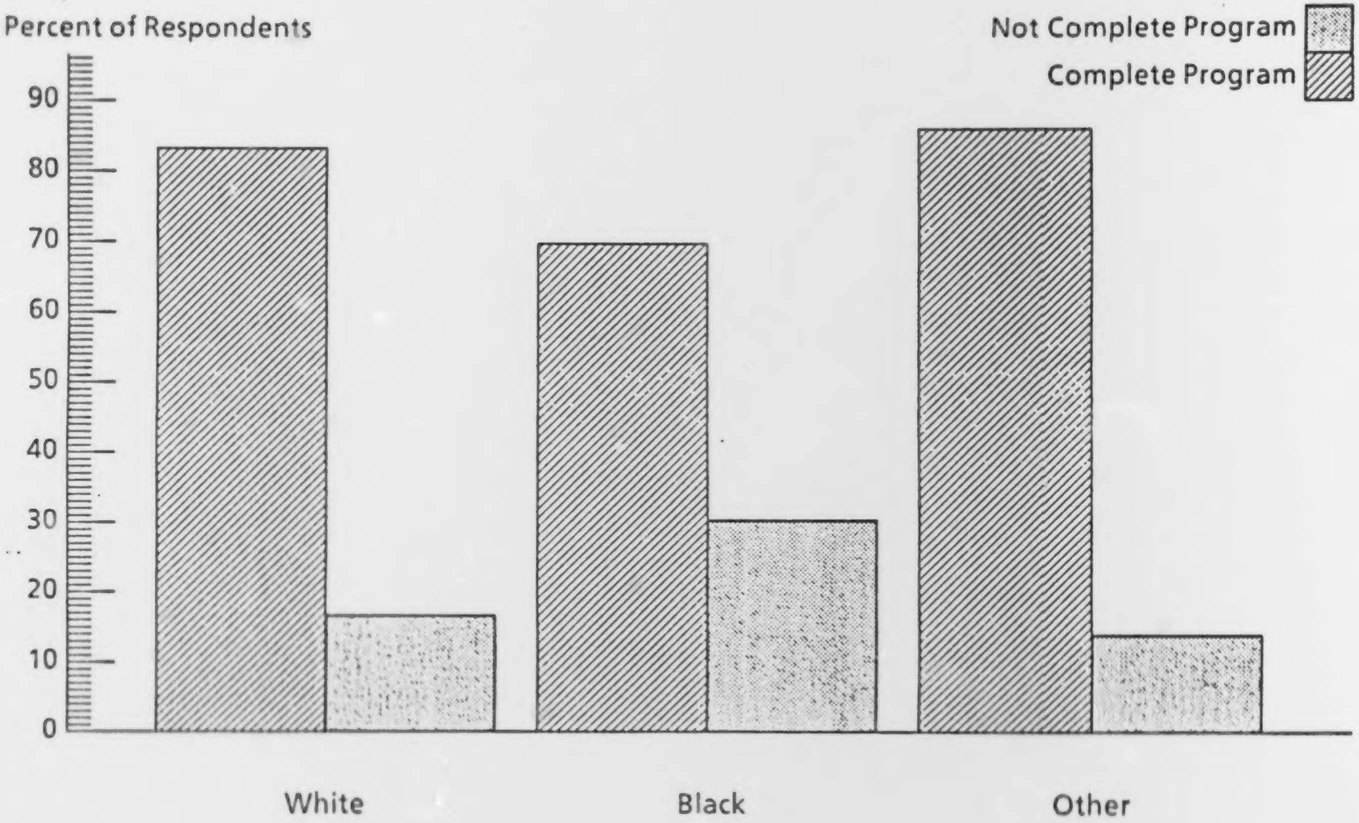


Chart 5

Program Completing by Current Income

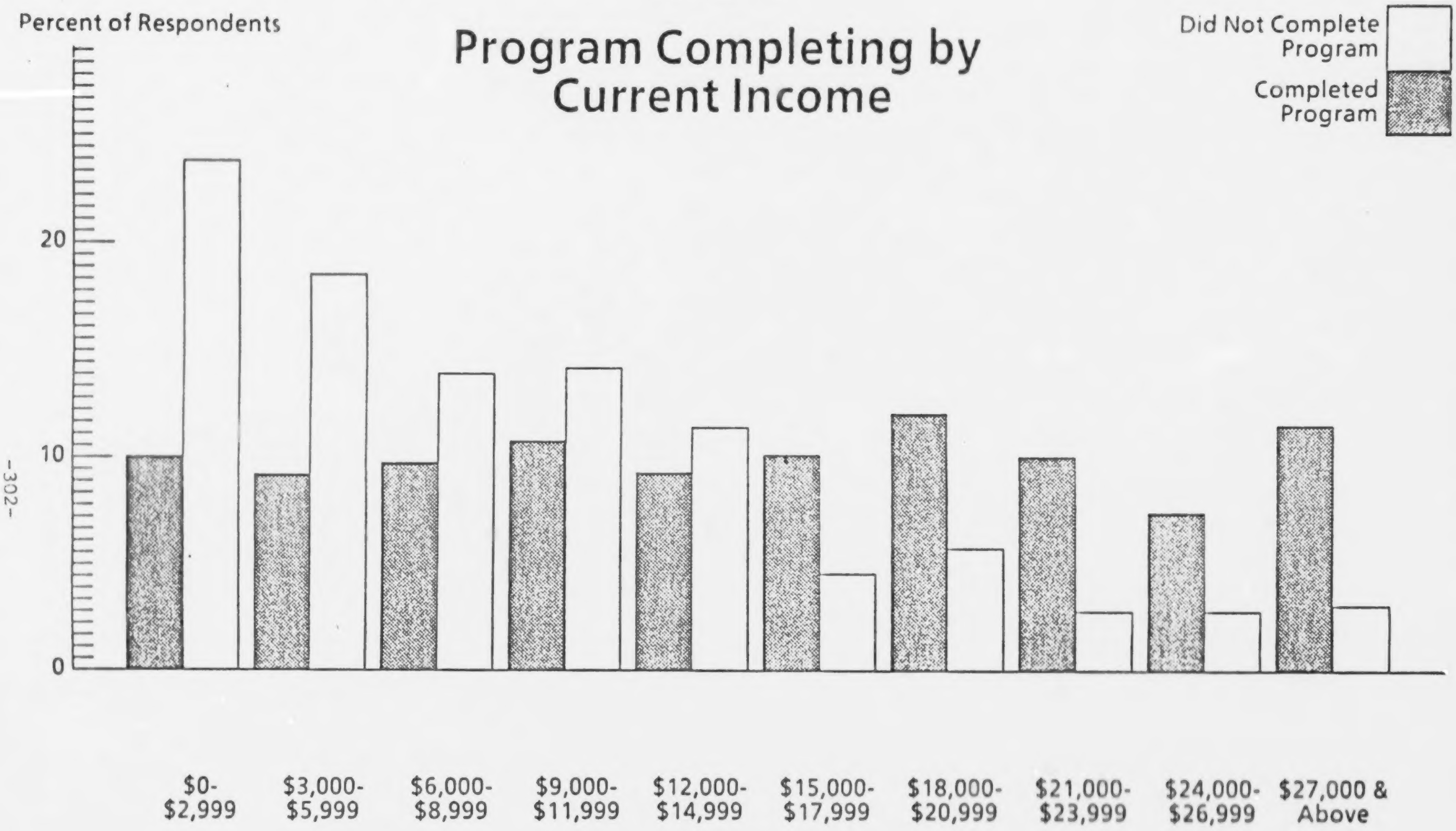


Chart 6

Program Completion Rate by Major Area of Study

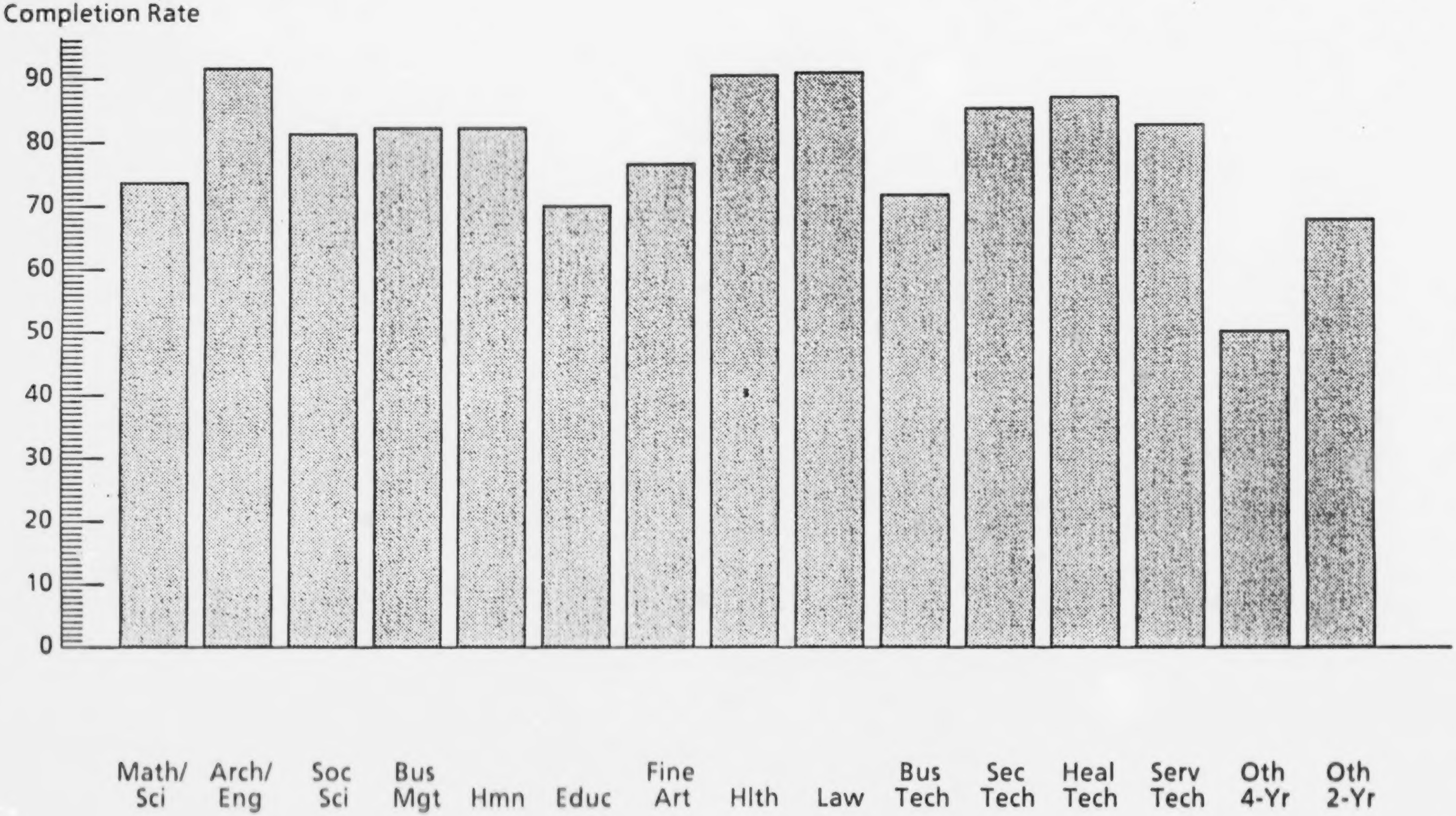
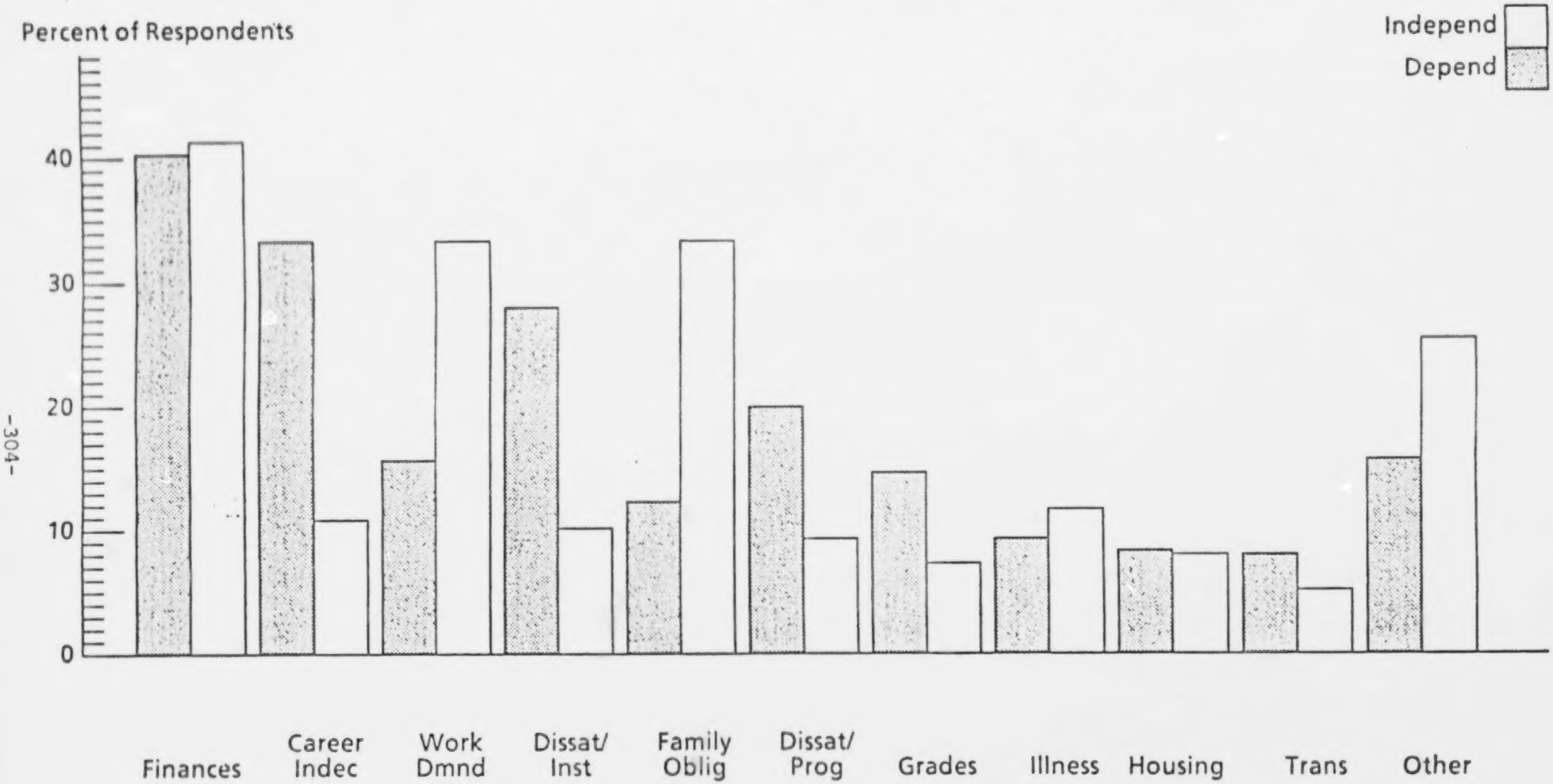


Chart 7

Reasons for Not Completing Education Program



Some New Evidence on the Determinants of Student Loan Default

Saul Schwartz
Tufts University

Sandra Baum
Skidmore College

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New Evidence on the Determinants of Student Loan Default

Rising costs have become a major source of dissatisfaction with the largest federally-subsidized student loan program. Appropriations for the Guaranteed Student Loan (GSL) program rose from about $1 billion in 1979 to an estimated $3.1 billion in 1987-88. Current costs are split between paying for defaulted loans (an estimated $1.6 billion in 1987-88) and paying interest subsidies to commercial banks on behalf of GSL borrowers (an estimated $1.5 billion in 1987-88). The default costs have dominated public attention because of their rapid growth, from $235 million in 1979, to $531 million in 1983 and then up to the current $1.6 billion a year.[1]

Much of the debate about student loan default has concerned the level of default rates. A 1987 report from Federal Funds Information for States (FFIS) written by Wolfe, Osman and Miller reported that 5% of all institutions participating in the GSL program had default rates exceeding 60%. About 40% of the eligible institutions had default rates greater than 20%.

The FFIS report spurred an intensive legislative search for policies to reduce default rates. A controversial Department of Education proposal would have limited the GSL eligibility of institutions with high default rates, institutions which often serve minority and low-income students. In addition, both the House and the Senate debated less stringent default reduction legislation.[2] In early October, the differences among the House, the Senate and the Department of Education on the details of a desirable plan led to an agreement to postpone action until the next President takes office. A common theme in the proposals was their emphasis on corrective actions to be undertaken by institutions with high default rates.

This paper provides new evidence on the determinants of student loan default which suggests that institutional characteristics may have little to do with default. By combining two large data sets - the High School and Beyond Survey (HS&B) conducted by the Center for Education Statistics and the "dump tape" data, provided by the guarantee agencies to the U.S. Department of Education - we are able distinguish among a number of competing explanations for student loan default. We begin by reviewing the pattern of default costs in the past decade and summarizing what is known about the correlates of default.

Default Costs

Like many other government credit programs, the Guaranteed Student Loan program is intended to provide credit to a group of individuals - students from relatively low-income families - who might otherwise be unable to borrow.[3] Such students usually have no credit record, no collateral to offer and no observable earnings potential.[4] A loan guarantee program assures that students will be able to borrow; but it assures that all eligible students will be able to borrow, including those with (unobservably) high risks of default. The very nature of the program makes default costs inevitable.

The cost of default to the Federal government is the product of the default rate and the overall volume of loans. Since the dollar volume of GSL loans rose rapidly in the 1980's, the dollar volume of loans in default would have risen even if default rates were constant or falling.

Have default rates risen in the past decade? To answer this question, we first need to agree on an appropriate measure of default rates. At the onset, we should note that no default rate is likely to be entirely satisfactory. Borrowers have ten years to repay the loans and might default at any time over those years. Because of this, most GSL borrowers are still "at risk" of default and no default rate based on current information can hope to be the "true" default rate.

The most commonly cited figures are gross cumulative default rates, calculated as the ratio of dollars which have gone into default since the inception of the program to dollars which are currently in repayment or in default. Since they are cumulative, these rates are relatively insensitive to changes over time in default patterns. In addition, loans which have been declared "in default" remain in the numerator forever (as part of cumulative defaults) while loans which have been repaid in full may be excluded from the denominator.[5]

Hauptman (1983) provides one of the few examples of default rates calculated consistently over a period of time. According to him, the cumulative gross default rate rose from 10.3% in 1977 to 12.3% in 1981. According to the FFIS report, the gross cumulative default rate for GSL's was 10.8% in 1984 and 12.1% in 1986.

The gross default rate takes no account of the fact that many loans which go into default are eventually collected. The net default rate, which excludes loans on which repayment has resumed, was less than half the gross default rate in 1980 and 1982 (Hauptman, 1983). Since increasing efforts have been made in recent years to collect on defaulted loans, it seems reasonable to assume that the spread between the two rates has, if anything, been increasing. Between 1978 and 1986, collections on previously defaulted GSLs rose from $71 million to $420 million nationwide; the growth rate of these collections during this period was greater than the rate of growth of loans entering default status (Wolfe, Osman and Miller (1987), pp. 3-4).[6]

While the evidence just reviewed is inconclusive, it does not suggest any rapid or sudden increase in default rates. Evidence from individual states corroborates this view. In a study of the GSL program in Minnesota, Schwartz and Baum (1988) found evidence of declining default rates. Similarly, default rates appear to be declining in New Jersey (Berkner, 1986), Pennsylvania (Davis, 1988) and Massachusetts (Massachusetts Higher Education Assistance Corporation, 1987).[7]

Previous Evidence on the Correlates of Student Loan Default

Most of the existing studies of default patterns are plagued by data inadequacies or methodological problems.

Surveys aimed at those already in default face the twin problems of inducing defaulters to respond to survey questions and then assessing the reliability of the answers of those who do respond. Nonsurvey data are sparse, consisting largely of information collected by guarantee agencies and servicing agencies; these data rarely contain very much background information, usually lacking even the race and sex of borrowers.

Despite these problems, the existing literature on student loan default has produced a set of "stylized" facts about defaulters. Defaulters come from low-income family backgrounds and disproportionately belong to racial minorities; they are more likely to have attended community colleges or proprietary institutions, to have borrowed only in their first year, and to have accumulated relatively small total debts. Furthermore, those who leave school without completing their programs are more likely than others to default. A number of studies, including Kuch (1978), Cresap, McCormick and Paget (1979), Lee (1982), New York State Higher Education Services Corporation (1984), Ehlenfeld and Springfield (1984), Wilms, Moore and Bolus (1986, 1987), and California Student Aid Commission (1988), have all reached consistent conclusions on these factors.

New Evidence on the Correlates of Student Loan Default

A fresher perspective, albeit a still limited one, can be obtained by analyzing data which combine, for a group of GSL borrowers, extensive background information with loan status information. We have created such a data set by merging information from the High School and Beyond Survey and the "dump tape" data provided to the Federal government by state guarantee agencies. The merged data set combines "dump tape" information on each respondent's Guaranteed Student Loan status (in default, in repayment or in deferment) with the vast array of demographic, educational and vocational information provided by the HS&B.[8]

Several extremely important caveats are in order before we present our results. The "dump tape" data used here are from the 1983-84 academic year. The Department of Education has "dump tape" data through 1988 but the National Center for Education Statistics, which oversees the High School and Beyond survey, has matched borrowers with HS&B respondents only through the 1983-84 "dump tape" year. The students who were surveyed for the HS&B were seniors in high school in 1980. Because of these two facts, the results below pertain only to students whose first spell of post-secondary education ended early (probably by the spring of 1982) and who defaulted on their student loans very quickly. The results thus refer to a small subset of GSL borrowers. For example, students who graduated from four-year schools cannot be included; nor can borrowers who default after being in repayment for a year or two.

Sample sizes are relatively small; only 709 borrowers of the roughly 2600 represented in both the dump tape data and the HS&B were not classified as "in deferment". Of these 709, about 80 were classified as "in default".

The dump tape data also have well-known deficiencies. As an example, the "loan status" variable used to define HS&B respondents who are "in default" is the loan status of the last loan only. In addition, it is possible that a loan remains classified as "in default" even though the borrower has resumed payment.

With those caveats, however, we believe that a merger of the HS&B data and the "dump tape" data represents our best opportunity to uncover variables which are correlated with student loan default.

The results of our analysis are quite striking. There are two characteristics which are highly correlated with student loan default. First, blacks are significantly more likely to default than nonblacks. Second, those who were unemployed (and looking for work) in February of 1984 were significantly more likely to default than those who were not unemployed. These findings are apparent in simple crosstabulations, presented in Table 1, as well as in multivariate analyses.

Blacks represent about 188 of 709 (27%) of the borrowers analyzed here but they represent 48 of 80 (60%) of the defaulters. The default rate, measured as the number of borrowers in default divided by the number of borrowers not in deferment, is 26% for blacks and only 6% for nonblacks. Roughly 7% of the sample was unemployed in February of 1984 but the unemployed represent 24% of those in default. There is, of course, some overlap between the two groups. As in the general population, the unemployment rate for blacks (12% here) is roughly twice that of nonblacks.

These findings could conceivably be due to the vast oversimplification implicit in a bivariate cross-tabulation. In Table 2, we present linear regression results for a model in which the dependent variable is a 0-1 "in default" variable. The independent variables are divided into three sets.[9]

The three sets of variables conform roughly to three different "explanations" of default. One explanation stresses pre-college characteristics of borrowers such as race, sex and socioeconomic status. Another stresses institutional characteristics while a third focuses on the economic situation of the borrowers as they enter repayment.

Pre-college characteristics were collected in 1980, the base year of the HS&B, when the borrowers were seniors in high school. These variables include race, sex, a composite socioeconomic status measure, a variable indicating whether or not the respondent's father lived in their household and a measure of the respondent's high school grades.

The second group of variables captures the characteristics of the first post-secondary school attended by the respondent. The type of school first attended by the student is captured by a 0-1 variable indicating whether or not the respondent attended a two-year or a four-year school. Another variable indicates whether the respondent completed a college program. These variables were collected in the 1982 wave of the High School and

Beyond Survey.

The last set of variables presents a picture of the borrowers at the approximate time of default. Collected in the Second Follow-up wave of the High School and Beyond in 1984, they include marital status, the presence of children, the annual salary of the respondent's last job, and whether or not the respondent was unemployed in February of 1984.

The variables used here are clearly imperfect. We have not included all plausible background factors (we do not include family composition, high school characteristics or ability test scores). Nor can we capture all of the relevant institutional features (we do not include the type of program offered or the level of loan counselling).[10]

Subject to those limitations, our multivariate analysis indicates the significance of race and unemployment status. The coefficient on race, shown on line 1 in Table 2, is significantly different from zero as is the coefficient on unemployment (line 11 in Table 2). These coefficients imply that holding other factors constant, blacks are 8% more likely to default than nonblacks and those who are unemployed are 12% more likely to default than those who are not unemployed.

The regression also points out another variable which is significantly correlated with default. Respondents with children (in 1984) are 10% more likely to default than otherwise similar respondents without children (line 10 in Table 2) . Among the variables which do not seem important are all of the institutional variables, family income in 1980 and current family income, and the cumulative amount borrowed from the GSL program.

Conclusions

Given this evidence on the correlates of student loan default, what can be done to lower default rates? For obvious reasons, none of the default reduction proposals have suggested denying loans to student simply because they come from low-income family backgrounds or because they are black. Instead, the current policy proposals are aimed at inducing institutions to lower default rates by reclaiming loans made to students who drop out in the first month of the program and by providing better counseling about loan repayment and about the prospects of graduation and employment after graduation.[11]

While there is scattered evidence that institutions can reduce their default rates through better counseling and collection procedures, it seems clear that non-institutional factors are quite important. And we should not be surprised by this - those students who most need financial assistance in obtaining access to higher education schools are precisely those who are most likely to default.

Table 1

Correlates of Student Loan Default

1983-84 Default Information for Borrowers who were High School Seniors in 1979-80 and who were in loan repayment in 1983-84

Panel 1

	Not in Default	In Default	Total
Black	140	48	188 (27%)
Row Percent	74%	26%	
Column Percent	22%	60%	
Not Black	489	32	521 (73%)
Row Percent	93%	6%	
Column Percent	78%	40%	
Total	629 (89%)	80 (11%)	709 (100%)

Panel 2

	Not in Default	In Default	Total
Unemployed	33	19	52 (7%)
Row Percent	63%	37%	
Column Percent	5%	24%	
Not Unemployed	596	61	657 (93%)
Row Percent	90%	10%	
Column Percent	95%	76%	
Total	629 (89%)	80 (11%)	709 (100%)

Source: Merged data from the High School and Beyond Survey and Federal "Dump Tape" Data (see text for fuller description).

Table 2

Probit Estimates of the Correlates of Student Loan Default

1983-84 Default Information for Borrowers who were High School Seniors in 1979-80 and who were in loan repayment in 1983-84

Sample Size: 634
Dependent Variable: GSL Loan Status (1=Default)
Mean of Dependent Variable = 0.102
Chi-Squared = 64.593 (Against Hypothesis that all slopes are 0)

Independent Variable	Partial Derivatives Derived From Coefficient Estimates*	(t-statistic)
Background Characteristics		
1. Race (Black=1)	0.079	(3.36)
2. Sex (Male=1)	-0.0078	(0.34)
3. No Father in Household? (Yes=1)	0.025	(1.07)
4. Socioeconomic Status Quartile (Low=1)	-0.0010	(0.10)
5. High School Grades (1=C's and below)	0.018	(0.35)
Institutional Characteristics		
6. Type of School (Two-year School=1)	-0.019	(0.71)
7. Completed College Program? (Yes=1)	-0.0061	(0.28)
8. Cum. Amount Borrowed from GSL ($000)	0.0005	(0.76)
Economic Status at the Approximate Time of Default		
9. Married? (Yes=1)	-0.052	(1.76)
10. Children (Yes=1)	0.10	(3.40)
11. Unemployed in February, 1984? (Yes=1)	0.12	(3.68)
12. Yearly Income at Last Job ($000)	-0.0001	(0.68)
13. Constant	-0.20	(4.80)

* The numbers in the table are partial derivatives of the probability of GSL default with respect to a one-unit change in the independent variable. The derivatives are calculated at the mean values of the independent variables.

Source: Merged data from the High School and Beyond Survey and Federal "Dump Tape" Data (see text for fuller description).

ENDNOTES

1. In 1977, Guaranteed Student Loan volume was about $1.7 billion; 1.9 million individual loans were issued. By 1987, Guaranteed Student Loan volume had skyrocketed to $9 billion, distributed over 3.5 million borrowers. The primary source of Federal grant aid, the Pell Grant program, grew much more slowly over this decade, going from a $1.6 billion dollar program reaching 1.9 million students, to a $3.7 billion program providing aid to 2.9 million students. As a result, loans as a proportion of student financial aid grew from 17% in 1977 to over 50% in 1987.

2. The Department of Education plan would eliminate federal aid to students at institutions with default rates over 20%. Institutions would have two and a half years to reduce their default rates before the Department of Education could cut off their aid funds. The regulations specifically state that the department "does not consider the composition of the student body admitted by an institution to be an acceptable explanation for a high default rate." Institutions could appeal Department decisions, but they would have to prove that their default rate was high because of factors beyond their control, such as severe and unexpected unemployment in the field in which the school prepares its students to work.

   The Senate approved a bill in September which was somewhat less stringent. The measure would apply to institutions where more than 25% of former students (as opposed to 20%) have defaulted and only to schools that were among the top 5% of institutions in terms of total dollars in default. "Delinquent" institutions would have to devise default management plans in coordination with state guarantee agencies. If after three years, the institution was still in the delinquent category, the state agency could recommend another three-year plan or could propose that the school no longer receive financial aid funds. Before cutting off a school's eligibility, the Department of Education would be required to consider the socioeconomic condition of its students.

   The House bill was less stringent than either of the other two proposals, with no provision for cutting off aid funds. It would require institutions that had high default rates or that were in the top 5% of all institutions in terms of the total dollars in default to reach default reduction agreements with the Department of Education. The schools would not have been penalized, as long as they instituted these plans, even if their default rates remained high.

3. As Mankiw (1986) has pointed out, guarantees may be the only way to provide such credit because, in the absence of the guarantee, no private lending will occur. Private lenders cannot distinguish between students who are good risks and those who are bad risks; the reason for this imperfect information is that most students are alike in having little, if any, collateral to put up against the possibility of default and few can convincingly demonstrate their future earning power. Furthermore, banks are legally barred from using personal characteristics such as race, sex and marital status in determining loan eligibility. One might think that such imperfect information about potential borrowers would simply lead banks to charge higher interest rates; but, as Mankiw notes, as the interest rate rises, those who have no intention of repaying the loan will continue to borrow but more and more of those who do intend to repay will be forced out of the market. In such a situation, no loans will be made at all.

4. Students from relatively high income family backgrounds may have access to credit through their parents and there are a growing number of unsubsidized parent loan programs.

5. There is no good reason for excluding loans which have been "paid in full" from the denominator. Until recently, "paid in full" loans were deleted from the data bases of some guarantee agencies and thus from the data provided by those agencies to the Federal government. As a result, the cumulative default rate for individual schools can be grossly exaggerated; for example, a school which has closed will eventually have a default rate greater than one since there will be no new loans coming into repayment. Some of the schools with the highest default rates in the FFIS study mentioned above had in fact closed their doors.

6. However, Merisotis (1988) reports that the net cumulative default rate on GSL's has actually increased, from 2.3% in 1984 to 4.3% in 1988.

7. The state studies focus on "cohorts" of borrowers and measure default rates as the proportion of loan issued (or scheduled to come into repayment) in a given year which are in default.

8. The data utilized in this paper were made available (in part) by the Inter-university Consortium for Political and Social Research. The data for the High School and Beyond, 1980: Senior Cohort Third Follow-up were originally collected by the National Center for Education Statistics.

The Center also created a version of the Federal "dump data" data which contains the ID numbers of HS&B respondents; these ID numbers enabled us to match records from the "dump tape" data with the HS&B data. Neither the collectors of the original data nor the Consortium bear any responsibility for the analyses to interpretations presented here.

9. The sample size is for the analysis in Table 2 is 634 as opposed to 709 in Table 1 because of missing information on some of the additional variables in Table 2.

10. A number of other variables were included in preliminary analyses but not included in the results presented here. Additional institutional variables, such as whether the respondent's first post-secondary institution was public or private and a more detailed breakdown of type of school (two-year, vocational, four-year), added little explanatory power to the model. We included more precise measures of when children (if any) were born, we differentiated between blacks and Hispanics, and we used total family income (instead of respondent's annualized earnings). None of these additional variables were significantly different from zero when included in the analysis and their presence did not materially change our interpretation of the results.

11. Another proposal would give grants instead of loans to first and second year students. Yet another would scrap the existing system of student financial aid in favor of an "aid-for-public-service" plan.

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INDEPENDENT STUDENTS: ANALYSIS OF THE CHANGES IN DEFINITION

John B. Lee
University Research Corporation
Bethesda, MD

M. Nadir Atash
WESTAT
Rockville, MD

Data Series: NPSAS-87

U.S. Department of Education
Office of Educational Research and Improvement

FOREWORD

This report presents an analysis of changes in the definition of dependency for student finanicial aid using 1987 National Postsecondary Student Aid Study data. The National Center for Education Statistics (NCES) plans to conduct or to sponsor a number reports using these data. NCES has computer tapes available to those wishing to cary out their own analysis. Information about obtaining computer tapes for the National Postsecondary Student Aid Study is available from the U.S. Department of Education, Office of Educational Research and Improvement, Technical Services Branch, 555 New Jersey Avenue, N.W., Room 210, Capitol Place Building, Washington, D.C. 20208-5725.

Samuel S. Peng, Director
Postsecondary Education Statistics Division
National Center for Education Statistics

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I. PURPOSE

In 1986 Congress changed the need analysis system, writing the new rules into law. The most significant change was the definition of independent students which was used for the first time in the fall of 1987. The purpose of this analysis is to use the National Postsecondary Student Aid Study (NPSAS) data to provide information on the changes introduced by the new definition of independence. In addition, the report provides a more complete description of the characteristics of independent students than has been possible before.

Need analysis is a set of standards used to evaluate a family's ability to pay the cost of attending an institution of postsecondary education. The rules take income, assets, family size, extraordinary expenses, and other characteristics relevant to estimating family financial strength into consideration. The amount necessary to live at modest levels is subtracted from resources to determine how much discretionary income is available to pay for the cost of attendance. The need analysis system allows families with very different income characteristics to be evaluated to determine how much money they should be able to contribute from discretionary income toward the cost of college.

One of the critical issues that needs to be decided for each attendee is whose income should be utilized. If a student is defined as dependent, the parents have the primary obligation to pay the costs. The student's income and savings are only used to supplement the parents' contribution. If a student is defined as independent, a major part of the student's and his or her spouse's income and assets will be allocated to educational costs and living expenses. Parents income is not considered in evaluating independent students ability to contribute to the costs of attendance.

Need is determined by subtracting the expected family contribution from the cost of attendance. In most cases, an independent student has less to contribute than parents which means greater need for the same cost of attendance. This calculation of need is a critical factor in determining how much financial aid the student is eligible to receive. The financial aid administrator uses the calculation of expected family contribution as a guide in awarding and packaging aid. A slightly different version of need analysis is used to determine Pell grant awards. In the case of Pell Grants, there is little flexibility for aid administrators to modify the award based on professional judgements.

The proportion of student aid recipients defined as independent has been growing in both absolute numbers and as a proportion student aid recipients. Independent students made-up roughly 25 percent of Pell Grant recipients in 1976. This increased to nearly 50 percent ten years later. There are three possible explanations for this growth. One, there are fewer 18 year old students, and more students in their 20's, enrolled in college today than ten years ago. This reflects the aging of the population and the passing of the post World War II baby boom from the traditional college age group. Older students are more likely to be independent than younger students. The second explanation is the incentive to become independent. A dependent student from a middle income family might not be eligible for student aid but would be eligible as an independent student. The third possible explanation is that independent students who would not have been able to attend school without aid in the early 1970's are able to do so now with subsequent growth in the availability of financial assistance.

Prior to Congress' change in the need analysis system, individuals were defined as an independent student for purposes of receiving federal student aid if they:

- were not claimed as a dependent for the previous and current years on their parents' or legal guardian's income taxes;
- had not lived for more than six weeks in their parents' home in the current and previous years; and
- had not received more than $750 from their parents in the current and previous years.

The problem with this definition was that it made verification of student independence difficult, particularly the amount of money students received from their parents and the duration of their residence in the family home. As a result, student aid administrators felt there was little possibility to enforce the rules. Prior to the federal change in the definition of independence, some states had developed definitions which made the status of independence more verifiable.

The new federal rules are designed to make the status of independence more verifiable as well as equitable in determining which family income (the parents' or the student's) should be used in determining expected family contribution. Analysts predict that the rule changes will result in increased eligibility and awards for some independent students. Under these rules, a student is considered independent if he or she:

- is 24 years of age by December 31 of the award year;
- is an orphan or a ward of the court;
- is a veteran of the United States armed forces; or
- has legal dependents other than a spouse.

Independent students will be treated differently depending on their marital status and whether they are not married with dependents or married with dependents. An unmarried undergraduate student may be considered independent if the student's parents (or guardian) did not claim the student as a dependent for income tax purposes for the two calendar years preceding the award year. In addition, the student must demonstrate annual total resources (excluding aid from parents) of $4,000 or more in the two calendar years prior to the initial receipt of Title IV aid, beginning with the 1987-1988 award year. A student who is married or who is a graduate or professional student, may be considered independent if the student's parents do not claim the student as a dependent for income tax purposes for the first calendar year of the award year.

For the purpose of this analysis, students are classified as less than half-time and more than half-time attendance status. Less than half-time students are defined slightly differently for each of the student program types. For clock hour students, less than half-time attendance is less than 12 hours a week; for graduate students it is less than four credits an enrollment period; and for undergraduate credit hour students less than half-time attendance is less than six hours a week.

II. DATA AND PROCEDURES

This analysis is based on data from the National Postsecondary Student Aid Study (NPSAS). The Department of Education funded the NPSAS project to collect information on student aid from individual students. The data include demographic, institutional, and financial information on students, and it covers all types of students in all types of institutions and enrollment statuses. The financial information includes the cost of attendance, sources of income and financial aid received from all sources. The data were collected from a nationally representative sample of 1,074 postsecondary institutions enrolling students in the fall of 1986. For an institution to be included in the NPSAS universe, it had to satisfy all of the following conditions:

- offer an education program designed for persons who have completed a secondary education;
- offer an academically, occupationally, or vocationally oriented course of study;
- offer access to persons other than those employed by the institution;
- offer more than just correspondence courses;
- offer at least one program lasting three months or longer; and
- be located in the 50 states or the District of Columbia.

In order to be eligible for NPSAS, a student must have been attending an eligible institution on or about October 15, 1986. In addition, a student had to be enrolled in a course for credit or in an occupational or vocational program or a course of studies leading to a degree or formal award. The student could not be enrolled in a high school program.

The final sample includes roughly 43,500 students. The records are weighted to represent 12,579,742 students enrolled in the fall of 1986. This is not an annual enrollment figure but a sample of students enrolled at a point in time. Data were collected from the institution's registrar and financial aid office, as well as from students and a sample of parents. Information on student aid was updated at the end of the fall enrollment period to identify and record award changes.

The use of the fall enrollment period as the time period for the 1987 NPSAS provides a consistent reference point with other national studies of postsecondary education. However, it does not represent all students who enrolled in a postsecondary institution during the entire year. In fact, only about two-thirds of all students enrolled in a postsecondary institution are enrolled in the fall. This proportion varies by institutional sector. More than 70 percent of the students enrolled in traditional four year institutions enroll in the fall, whereas only about 50 percent of the students attending private career schools enroll in the

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fall. (Estimates of the 1986-87 full school year enrollments by institutional sector are available in the NCES publication "Undergraduate Financing of Postsecondary Education".) What this means is that in tables comparing enrollments, the share ascribed to private, for-profit schools and community colleges are under-reported relative to the enrollment in four-year and above colleges. This should be kept in mind when reviewing results presented in this report.

This study took place prior to the implementation of the new definition of independence. Student aid recipients were classified as independent or dependent for purposes of estimating expected family contribution by the old rules. Students not receiving aid are classified as independent if they indicated on the NPSAS questionnaire they met all three of the conditions for independence as defined under the old rules of independence.

An individual is classified independent under the new rules if the student is over the age of 24, or if not, has dependents, is a veteran, an orphan, or a ward of the court. Age is the most important variable influencing the number of dependent students. If a student was formerly a dependent over 24 years of age it is assumed the individual will switch to independent status under the new rules. The same is assumed of graduate and professional students.

The measures of being a veteran, an orphan or a ward of the court are not well defined in the data but make little difference in the number of students estimated to be independent because there are very few who qualify under these criteria. The data do not include income for two years prior to current enrollment. These data are used to determine independency for those under 24 who want to be accepted as independent. Income data are only available for one year prior to current enrollment. These restrictions force the analysis of students under the new law to be based on a definition of independence based mostly on age, level of enrollment and family structure.

III. RESULTS

The results of analyzing the impact of the new definition of independent status are presented for undergraduate credit hour students, clock hour students (who are generally enrolled in vocational programs) and graduate and professional students. The results are tabulated for more than half-time and less than half-time students for each of the three groups. Students defined as independent under the old rules are compared to independent students under the new rules. More extensive analysis is made of the more than half-time undergraduate credit hour students than of the other groups. The reason for this is that this group has, by far, the largest number of students, and these students participate in all federal student aid programs. Comparing all independent students would result in misleading comparisons as independent students are more likely to be in graduate or vocational programs than dependent students.

A. Comparison of Independent Students with Dependent Students (Old Definition)

On a variety of measures, more than half-time undergraduate credit hour independent students differed from dependent students of similar status under the old definition of independence. Table 3.1 examines differences between the two types of students.

Table 3.1--The percentage of independent and dependent more than half-time undergraduate credit hour students by selected student and institution characteristics.

Selected student and institution characteristics	Independent	Dependent
Gender		
Male	40%	46%
Female	60	54
Age		
18-23	21	90
24-34	31	8
35+	48	3
Race/Ethnicity		
American Indian	1	1
Asian American	5	5
Black, Non-Hispanic	13	9
Hispanic	7	6
White, Non-Hispanic	74	78
Marital status		
Married	50	18
Not married[1]	50	82
Control of institution		
Public	80	76
Private, not-for-profit	15	21
Private, for-profit	5	3
Level of institution		
4 year, Ph.D.	25	36
4 year, No Ph.D.	25	29
2-3 year	47	33
Less than 2 year	3	1

Year in School		
Freshman/1st year	27	32
Sophmore/2nd year	26	28
Junior/3rd year	17	18
Senior/4th year[2]	29	22
Tuition and fees		
Blank/zero	(3)	6
Less than 500	38	19
501-1000	23	17
1001-1500	14	16
1501-2000	7	10
2001-2500	4	4
2501-3000	3	2
3001-4000	4	5
4001-5000	3	5
5000+	5	16

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[1] Includes students were single, separated, divorced, or widowed.
[2] Includes 4th year and higher undergraduates.
[3] Less than 30 unweighted cases.

NOTE: Totals do not always sum to 100 because of rounding errors.

SOURCE: U.S. Department of Education, National Center for Education Statistics, The 1987 National Postsecondary Student Aid Study.

As this comparison demonstrates, independent students are more likely to be older, female, Black (non-Hispanic), married, attend a public or private for-profit school, attend a two or three year or less school, pay a lower tuition, and attend school for more years than dependent students. The share of Hispanics, American Indians, or Asian-American does not change much between independent and dependent students. Age is the most obvious distinction. Nearly 80 percent of independent full-time undergraduate credit hour students are over 24 years of age, while 90 percent of the dependent students fall below this age level. Independent students are much more likely to attend a low tuition school than dependent students.

B. Enrollment of Independent Students (Old Definition)

Under the old definition of independence used in the fall of 1986 there were an estimated:

- 314,946 independent clock hour students
- 842,330 independent graduate and professional students
- 3,782,967 independent undergraduate credit hour students
- 4,992,034 total independent students

There is a combined total of 11,213,432 dependent and independent undergraduate credit and clock hour students. Just over one-third (36.5 percent) of undergraduates were independent under the old definition. Over two-thirds (67.1 percent) of the 1,254,509 graduate and professional students were independent under the old definition. Taken alone, over half (56.0 percent) of the 559,477 clock hour students were independent.

The following two tables (3.2, 3.3) present the enrollment of independent students by the highest level of school offering and control of institution. The vast majority of independent students, 76.6 percent, were in undergraduate credit hour programs followed by 17.1 percent in graduate programs and the remaining 6.3 percent in clock-hour programs.

As indicated earlier, less than half-time students are defined slightly differently for each of the student program types. For clock hour students, less than half-time attendance is less than 12 hours a week; for graduate students it is less than four credits an enrollment period; and for undergraduate credit hour students less than half-time attendance is less than six hours a week.

Table 3.2--Independent student (old definition) enrollment by student attendance status, program type, and level of institution

Level of institution	More than half-time	Less than half-time	All students
		Clock contact hour students	
Total	297,303[1]	17,644[1]	314,947
4-year, Ph.D.	(2)	(2)	(2)
4-year, no Ph.D.	1,808	400	2,208
2-3 year	78,549	4,812	83,361
Less than 2-year	216,496	12,432	229,378
		Credit hour students	
Total	2,497,537	1,285,430	3,782,967
4-year, Ph.D.	625,926	159,322	785,248
4-year, no Ph.D.	624,453	201,564	826,017
2-3 year	1,174,386	923,656	2,098,042
Less than 2-year	72,772	888	73,660
		Graduate students	
Total	596,912	245,418	842,330
4-year, Ph.D.	478,052	151,091	629,143
4-year, no Ph.D.	118,860	94,327	213,187
2-3 year	(2)	(2)	(2)
Less than 2-year	(2)	(2)	(2)

[1] Excludes students who could not have been classified as either less than half-time or more than half-time.

[2] Less than 30 unweighted cases.

SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

The largest share of independent students were enrolled in two to three year schools which are, for the most part, community colleges. A large porportion of the independent students in community colleges are less than half-time.

Under the old definition of independence, very few clock hour independent students attended less than half-time. Clock hour students are generally enrolled in vocational programs with a majority in two-year or less programs. Less than 30 (29.1) percent of the graduate and professional students qualified as less than half-time, and 34 percent of the undergraduate credit hour independent students attended school less than half-time. Overall, under the old definition nearly 32 (31.7) percent of all independent students in postsecondary education were enrolled less than half-time. In comparison, less than four (3.7) percent of undergraduate dependent students are enrolled less than half-time.

The next table, Table 3.3, presents enrollment of independent students by control of school.

Table 3.3--Independent student (old definition) enrollment by student attendance status, program type, and control of institution

Control of institution	More than half-time	Less than half-time	All students
	Clock contact hour students		
Total	297,303 [1]	17,644[1]	314,947
Public	116,400	14,985	131,385
Private, not-for-profit	3,570	513	4,083
Private, for-profit	177,333	2,146	179,479
	Credit hour students		
Total	2,497,537	1,285,430	3,782,967
Public	1,996,790	1,145,256	3,142,046
Private, not-for-profit	370,924	135,775	506,699
Private, for-profit	129,823	4,399	134,222
	Graduate students		
Total	596,912	245,418	842,330
Public	353,962	163,055	517,017
Private, not-for-profit	242,950	82,363	325,313
Private, for-profit	([2])	([2])	([2])

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[1] Excludes students who could not have been classified as either less than half-time or more than half-time.
[2] Less than 30 unweighted cases.
SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

Over three-fourths of all independent students were enrolled in public colleges, with just under 17 percent enrolled in private, not-for-profit colleges and 6.4 percent in private, for-profit schools. If the enrollment numbers were presented for full year, the private, for-profit school share would be greater.

C. Type of Student Financial Aid Received

Table 3.4 reviews the percentage of more than half-time undergraduate independent students (under the old definitions) receiving various types of financial aid. The table also presents the percentage of dependent students (old definition) receiving each type of aid. Just over 58 percent of all more than half-time independent students receive some form of aid.

Table 3.4--Percent of independent and dependent undergraduate, credit hour, more than half-time, students receiving each type of aid.

Type of aid	Percent of independent students receiving aid	Percent of dependent students receiving aid
Any aid	58%	48%
Grant aid	50	38
Federal grant	40	23
Pell grant	32	9
SEOG	7	4
Any loan	31	26
Federal loan	30	25
Stafford loan	24	20
Perkins loan	7	7
Work study	7	8

SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

Federal grants, mostly in the form of Pell grants, comprise the majority of grant assistance for independent students. Nearly 50 percent of more than half-time independent undergraduate credit hour students receiving aid under the old rules had a grant.

In comparison to independent students, more than half-time dependent undergraduate degree credit hour students are less likely to receive aid, with 48 percent receiving some form of assistance.

The next table indicates the proportion of dependent and independent undergraduate students receiving aid by control and type of institution. The proportions differ from the previous table because all students are included, not just more than half-time students. The greater proportion of less than half-time independent students dilute the percentagesof students receiving aid. In public and private, for-profit schools dependent students are more apt to report the receipt of aid than independent students. Only in private, not-for-profit colleges do more independent students receive aid than dependent students. The only institutional level showing independent students more likely to receive aid than dependent students is four-year non-Ph.D. granting colleges.

Table 3.5--Percent of undergraduate independent and dependent students (old definition) receiving aid by control and level of institution.

Control and level of institution	Percent of Independent students receiving aid	Percent of Dependent students receiving aid
Control of Institution		
Public	36.4%	40.5%
Private, not-for-profit	66.6	61.5
Private, for-profit	79.7	87.7
Level of institution		
4-year, Ph.D.	47.8	58.3
4- year, No Ph.D.	56.1	54.7
2-3 year	28.8	35.2
Less than 2-year	71.2	79.3

SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

The type of aid received by graduate and professional students is more diverse and thus the list of options is longer. Roughly 63 percent of independent more than half-time graduate and professional students report receiving some form of financial assistance. The percentage reporting for each type of aid is provided in Table 3.6.

Table 3.6--Percent of independent graduate and professional students receiving each type of aid.

Type of Aid	Percent Receiving Aid
Any aid	63%
Grant grant	29
Any loan	31
Stafford loan	28
Perkins loan	5
Work aid	23
Work study	2
State aid	6
Institutional aid	37
Tuition waivers	19
Employment aid	9

SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

Independent graduate students differ from undergraduates as they are more likely to use loan aid relative to grant aid. The sources of aid are also more diverse with less reliance on federal aid.

Table 3.7 indicates the proportion of independent more than half-time undergraduate students receiving aid and the amount of aid received by those receiving aid.

Table 3.7--Percent of independent more than half-time undergraduate students receiving financial aid and average amount of aid received by selected student characteristic.

Student characteristic	Percent receiving student financial aid	Average amount received by aided students
Gender		
Male	59%	$3,552
Female	58	3,104
Age		
18-23	77	3,898
24-34	62	3,165
35+	48	2,951
Race/Ethnicity		
American Indian	80	3,849
Asian American	56	3,843
Black, non-Hispanic	68	3,214
Hispanic	59	3,186
White, non-Hispanic	56	3,251
Other	58	4,826
Marital Status		
Married	50	2,842
Not married[1]	50	3,581
Control of Institution		
Public	54	2,829
Private, not-for-profit	73	4,864
Private, for-profit	88	3,849
Level of Institution		
4 year, Ph.D.	67	4,102
4 year no Ph.D.	65	3,805
2-3 year	49	2,256
Less than 2-year	88	3,809

Table 3.7--Percent of independent more than half-time undergraduate students receiving financial aid and average amount of aid received by selected student characteristic--Continued

Student characteristic	Percent receiving student financial aid	Average amount received by aided students
Tuition		
Blank/zero	(2)	(2)
Less than 500	41%	$1,986
501-1000	62	2,771
1001-1500	72	3,457
1501-2000	75	3,804
2001-2500	79	3,660
2501-3000	78	3,785
3001-4000	81	4,392
4001-5000	87	4,835
5001+	86	6,581
Academic level		
Freshman/1st year	61	2,792
Sophmore/2nd year	58	2,988
Junior/3rd year	62	3,609
Senior/4th year[3]	55	3,812

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[1] Includes students who were single, separated, divorced, or widowed.

[2] Less than 30 unweighted cases.

[3] Includes 4th year and higher undergraduates. The proportion of senior/4th year students receiving aid is 64% while the proportion of 5th through 7th year students is 47%.

SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

A review of the results under the old definition of independence point out that the opportunity for aid and the amount of aid varies by a number of measures. Males are just as likely to receive aid as females, but the total aid package is larger for males. Younger students are more likely to receive aid than older students, with the former also receiving more aid. Black (non-Hispanic) and American Indian students are the most likely to receive aid, but Asian Americans and Indians receive the largest amounts of aid. Single independent students are more likely to be aid recipients and receive more aid than married students. Students enrolled in private, for-profit schools are the most likely to receive aid, but students in private, non-profit colleges receive the largest aid packages.

Students in less than two-year schools are the most likely to receive aid but undergraduates in universities receive the largest package of aid. It appears that independent students at public community colleges are the least likely to receive aid, and those that do receive assistance report the lowest average amount compared to other sectors. The higher the tuition of the school, the more likely a student will receive aid and the more aid he or she will receive. Fourth year students receive the most aid and the largest amount of assistance compared to students with fewer years in school.

D. Enrollment and Characteristics of Independent Students (Old Definition)

1. Credit and Clock Hour Differences

Differences and similarities are found in the enrollment patterns and characteristics between independent undergraduate credit hour and clock hour students. There are similarities in some student characteristics between credit and clock hour students. Some of the expected similarities confirmed by the data are summarized below. Regardless of student program type:

- older independent students have higher incomes;
- married students are older;
- married students have higher incomes; and
- older students attend school for more years.

For undergraduate students, there is also a relationship between student program type and institution level and control. Among clock hour students:

- 72 percent of the students enrolled in less than two year schools are enrolled in private, for-profit schools, with 27 percent in public schools. Private, non-profit colleges do not enroll very many clock hour students;

- 82 percent of the clock hour students enrolled in institutions offering two and three year programs are enrolled in public schools, with only 17 percent in private, for-profit schools; and

- two-thirds of the clock hour students are enrolled in their first year of school.

For undergraduate credit hour students:

- 75 percent of those in less than two-year programs are in private, for-profit schools;
- 95 percent of students enrolled in schools with two- to three-year programs are in public schools;
- 62 percent of the four-year school independent students are in public colleges and 37 percent in private colleges; and
- 81 percent of the independent students enrolled in universities are in public colleges and 19 percent in private.

2. Tuition Differences

One of the more important conclusions strongly supported by the NPSAS data is that higher income independent students are more likely to enroll in lower cost schools. Low income students are more likely to attend private, for-profit schools than their wealthier peers who atend public community and four-year colleges.

Students who are older, White (non-Hispanic) have a higher income, and are married are likely to be enrolled in low tuition schools. Poorer, single minority students, on the other hand, tend to go to higher cost schools. Independent students with income over $15,000 are more likely to attend schools with tuition under $1,000 annually than are independent students with lower income. In contrast, higher income dependent students are more likely to attend more expensive schools.

3. Independent Graduate and Professional Students Differrences

There are differences in the enrollment characteristics of independent graduate and professional students depending on whether they are enrolled in a Masters, a Ph.D. or a first Professional program. Nearly three-fourths of the independent graduate and professional students are enrolled in Master degree programs. Only 13 percent are in first professional programs and 15 percent in Ph.D. programs. Over 37 percent of the Masters degree students attend less than half-time. The combination of less than half- and more than half-time students does not equal the total because some students cannot be classified by attendance status.

The most striking result that 72 percent of the independent graduate and professional students are enrolled in Masters degree programs. The remaining 28 percent are fairly evenly enrolled in Ph.D. and first professional programs with a slight edge to the Ph.D. enrollment share. Over 70 percent of independent graduate and professional students are enrolled in non-Ph.D. granting institutions. The vast majority, 87.4 percent, of less than half-time independent graduate students are enrolled in Masters programs. The incidence of less than half-time enrollment in the first professional and Ph.D. programs is minimal.

There is nearly a 60 percent to 40 percent split in the enrollment of independent graduate students between public and private colleges. First professional students are more evenly divided between publicly and privately controlled colleges and universities (53 percent to 47 percent). Independent Masters degree students are more likely to be enrolled in public colleges (68 percent to 32 percent). Ph.D programs show nearly the same pattern as Masters degree programs with 66 percent of the students enrolled in public colleges.

Nearly 31 percent of the independent graduate students in public colleges and universities are enrolled less than half-time with just over 25 percent of their peers in private sector institutions are less than half-time.

E. Independent Students (New Definition)

The number and types of students who are defined as independent under the new definition is based on student provided information. If students indicated on the questionnaire that they met the necessary conditions for independency they were so classified.

Review of the new definition of independence indicates that the age group 24 to 34 would increase as a share of the total pool of independent students. This means that a number of students, over 24, who were defined as dependent under the old definition would be redefined as independent under the new definition. A large proportion of the dependent students (under the old rules) converting to independent (under the new rules) are single. This would result in a decline from 50 percent of the independent students being married under the old rules to 41 percent under the new rules. Under the new definition of independence 44 percent of students would be single males compared to 40 percent under the old rules.

Table 3.8 summarizes the number of independent students, under the old and new definition of independence by student program type. In addition, the table presents the number and percentage of students defined differently under the two definitions of independence.

Table 3.8--Number of independent students by new and old definition of independence, and number and percent of students classified differently, by student program type.

Student Program type	Old definition	New definition	Difference number	Difference percent
Total independent students	4,992,034	6,555,053	1,563,019	(31.3%)
Independent clock hour students	314,946	357,402	42,456	(13.5%)
Independent graduate and professional students	842,330	1,254,503	412,173	(48.9%)
Independent undergraduate credit hour students	3,782,967	4,943,148	1,160,181	(30.7%)

SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

This approximation assumes all graduate and professional students, including those over the age of 24, would have become independent under the new definition. Financial aid administrators do have the opportunity to redefine dependency status for graduate and professional students and for students over the age of 24 if they believe that utilizing parents income is appropriate. A more precise measure of independence than is possible with the current data may change the approximations provided in this study. The actual number of independent students under the new rules will probably be less than those reported here due to decisions of student financial aid administrators.

On the basis of the approximations presented above, the number of independent students would increase overall by 31.3 percent from the old to the new definition. There would be a 13.5 percent increase for clock hour students, 48.9 percent for graduate and professional students, and 30.7 percent increase for undergraduate credit hour students.

F. Less Than Half-Time/More Than Half-Time Enrollment (New Definition)

The share of independent less than half-time student enrollment would have declined slightly from the old to the new definition in 1986. Table 3.9 reflects the number of students defined as more than half- and less than half-time under the new definition of independence. As indicated earlier, the totals differ from the overall totals of enrolled students because some students' enrollment status cannot be classified.

Table 3.9--Number and percent of independent students (new definition) by attendance status, program type and definition of independence.

Definition of independence	More than half-time number	percent	Less than half-time number	percent	All students number	percent
			Undergraduate clock hour students			
Old definition	234,549	93%	17,644	7%	252,193	100%
New definition	297,303	93	22,426	7	319,729	100
			Undergraduate credit hour students			
Old definition	2,497,537	66	1,285,430	34	3,782,967	100
New definition	3,288,382	67	1,654,760	33	4,943,142	100
			Graduate students			
Old definition	596,912	71	245,418	29	842,330	100
New definition	946,240	75	308,263	25	1,254,503	100

SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

Very few (seven percent) independent clock hour students would have been less than half-time under the new rules of independence, about the same as under the old definition. The new graduate student numbers represent all graduate and professional students enrolled, for all would have been independent under the new rules. Under the new rules, one-quarter of all graduate and professional students would have been enrolled less than half-time. This is a slight decline from the old definition. One-third of all independent undergraduate credit hour students would have been enrolled less than half-time under the new definition of independence. This too represents a minimal decline from the old definition in the proportion of less than half-time students. These percentages represent a slight decrease, overall, in the share of less than half-time independent students compared to the old rules.

There would have been very little change in enrollment shares by type and control of schools, race and ethnicity of the students, and the amount of tuition paid. This suggests the changes in the definition of independence would have resulted in an increase in the number of single students, students age 24-34, and male students compared to the old definition. There would have been very little change in the mix of less than half-and more than half-time enrollment.

G. Receipt of Student Financial Aid

The most important reason for reviewing changes in the definition of independence is to anticipate implications for student aid. This section reviews the receipt of aid by independent students under the old and new definition of independence.

Table 3.10 identifies the potential overall shift in receipt of aid caused by the change in definition of independent students which has implications for utilization of aid dollars. The first column in the table is the number of undergraduate students receiving aid under the old rules. The second column is the number of students who would have received aid under the new rules if the proportion of dependent and independent students receiving aid were the same as under the old rules. The third column is the change from the old to the new.

Table 3.10--Number of undergraduate dependent and independent aided students by old and new definition of independence and control and level of institution.

Control and level of institution	Number of aided students (old definition)	Estimated number of aided students (new definition)	Difference	
			number	percent
All undergraduates	5,098,770	5,100,484	1,714	0.0%
Control of institution				
Public	3,260,589	3,280,283	19,694	0.6
Private, not for profit	1,332,331	1,314,351	(17,960)	(1.3)
Private, for profit	505,870	505,850	20	0.0
Level of institution				
4-year, Ph.D.	1,684,624	1,700,553	15,929	0.9
4-year, no Ph.D.	1,573,881	1,559,217	(14,664)	(0.9)
2-3 year	1,441,571	1,478,215	36,644	2.5
Less than 2-year	398,693	398,997	304	0.1

SOURCE: Department of Education, National Center for Education Statistics, 1987 National Postsecondary Student Aid Study.

There would have been no discernible difference in the number of students receiving aid between the old and new definition of independence. If the comparison was limited to more than half-time undergraduate credit hour students there would be an increase of 5.4 percent in the number of eligible recipients. There would be no difference in the number of students receiving aid for either more than half-time graduate or clock hour students. This analysis is based on the assumption that new independent students will receive aid at the same rate as those students independent under the old definition. No distinction is made as to the source or type of aid received by students. It is not possible to assess the amount of aid that might be received by the newly defined independent students because independent student income is not available for these students. Only parents income is available for newly defined independent students.

IV. Summary and Conclusions

This analysis began by identifying characteristics that distinguish independent students from dependent students (based on the old definition of independence). Compared to undergraduate dependent students, independent students are more likely to:

- attend school part-time;
- be older;
- be married;
- attend two-year or less schools;
- attend low tuition schools;
- attend public schools; and
- receive student aid if they are full-time.

One of the most striking results of the analysis is for higher income independent students to attend lower tuition schools than those attended by lower income students. This is the inverse of what happens in dependent student cases where higher income families are more likely to send their offspring to higher tuition schools. The phenomena is explained by the fact that the poorest independent students attend private, for-profit career schools while more well-to-do independent students attend public colleges.

It appears that the change in undergraduate dependency status will probably have little net effect on the number of students receiving aid. It is not possible to anticipate if the amount of aid, or indeed the type of aid will increase from the old to the new definition. Many of the formerly independent students received aid as dependents. In general, the change in dependency definition does not appear to modify the distribution of aid overall. It should be remembered that the change in definition could have significant impact on individual students.

Under the old definition of independence, graduate students are twice as likely to be independent than undergraduates. Over half of the clock hour students were defined as independent. The bulk of independent students attend public schools, with community colleges enrolling the most of any sector. Relatively speaking, private colleges do not enroll many independent students.

The undergraduate students most likely to change from dependent to independent status are between the ages 18-23, single, and are full-time upper division male students. There is little difference in the receipt of aid between dependent and independent graduate and professional students. The same is true for contact hour students.

The new definition of independent student is designed to allow verifiable identification of student independence. Under the most extreme situation, the new rules will increase the number of students identified as independent from 5 million to 6.5 million, nearly a third. Given that a number of over 24 year old students and graduate and professional students will remain dependent under the new rules, the actual increase may be somewhat smaller.

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FINANCIAL AID AS A FACTOR IN HISPANIC STUDENTS' COLLEGE ATTENDANCE: WHAT CAN BE SAID FROM THE NATIONAL POSTSECONDARY STUDENT AID STUDY?

Gwendolyn L. Lewis
The College Board Washington Office

Background

Hispanic students are underrepresented in higher education compared to other types of students because of low rates of high school graduation, college-going, and persistence once enrolled. Recent increases in the numbers of Hispanics attending colleges and universities are attributed to larger cohorts of Hispanics turning 18, rather than any increased propensity of Hispanics to enroll (Duran, pp. 77-78). Since Hispanics are the third largest ethnic/racial group in American higher education, obstacles to their obtaining education have a major impact on higher education generally.

Hispanic undergraduate students are seriously underrepresented at 4-year colleges and universities. Their representation in 2-year institutions is equivalent to their proportion of 18-24 year olds (Duran, p. 78). Previously, data on representation of Hispanics in proprietary schools were not available.

Lack of academic preparation for college is one explanation for such enrollment patterns, but finances may well be another. Poverty is widespread among the various Hispanic groups. Twenty-five percent of Hispanic families had incomes below the poverty level in 1987 (Commerce, p. 49). Great diversity exists among Hispanics, particularly along national origin lines. The nationality groups with more young people (Puerto Rican and Mexican Americans/Chicanos) are also the largest, thus providing more potential students. But, these are precisely the groups in which poverty is most prevalent and thus financial assistance to study is needed most.

Purpose of the Research

The purpose of this research is to explore the role of student aid in Hispanics' underrepresentation in major segments of postsecondary education. There are two reasons for conducting the research. One is to respond to a request from Arturo Madrid of the Tomas Rivera Center for information about Hispanic students' financial aid. The second is to use this small project as a means to start analyzing National Postsecondary Student Aid Study (NPSAS) data.

Working Hypothesis

The working hypothesis for this study is: Hispanic students engage in behaviors that reduce their likelihood of receiving financial aid in spite of their low income--attending low-cost institutions, such as two-year colleges; attending part-time; living at home; and working while studying.[1] These practices would reduce a student's calculated need for aid and thus his or her access to it. We will document which, if any, of these practices Hispanic students engage in and which practices, if engaged in, are actually associated with lower aid for Hispanic students.

Methods

To investigate these questions we analyzed data on undergraduate students enrolled in the fall of 1986-87 collected by the National Postsecondary Student Aid Study (NPSAS 87). NPSAS 87 provides the first comprehensive data on the sources and amounts of students' financial aid, as well as their personal and institutional characteristics. The information comes from a nationally representative sample of student financial aid and registration records and survey information from about 35,000 aided and unaided undergraduate students.[2] The sample includes about 2,000 Hispanic undergraduate students representing 1.6 million Hispanic students nationally. Of the Hispanic students sampled 1,302 were aided. This relatively small sample of Hispanic students was adequate for the analyses reported here.

The data were obtained from the National Center for Education Statistics (NCES) on 20 floppy diskettes. Originally, we had planned to analyze these data on a WANG 280 personal computer with a 20 MB hard drive using the statistical package SPSS/PC+. Because of computer space allocated to software, we had between 5 and 10 MB of working space. This proved to be inadequate to the work required. While we worked to expand computing capacity, Jim Smith at WESTAT generously offered to provide us computing assistance. Thus, most of the programming to construct the tables presented here was conducted at WESTAT under the able direction of Nadir Atash, for which I am very grateful.

Since upgrading the WANG 280 with an additional 42 MB hard drive, a math coprocessor, and another 1 MB of RAM, work with these data has gone well. We have also added an Everex 386 machine that has a 2 MB RAM and a 60 MB hard drive. So, we are now in good shape to conduct future analyses.

Research Results

Student Background Information

Nationalities Representation. The nationalities represented among Hispanic students was about the same as the population distribution, but with fewer Mexican Americans and Puerto Ricans. Over one-half of all Hispanic students identified themselves as Mexican Americans/Chicanos. (See Table 1.) Puerto Ricans and Cubans were each less than ten percent of the Hispanic category. "Other Hispanics," which may include mixed family backgrounds, as well as all other Central and South American-origin students, comprised about one-third of the students.

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[1] Similar factors have been found to be associated with lack of progress toward a degree by Chacon, et al.

[2] Only U.S. mainland institutions were sampled. Thus, students attending institutions in Puerto Rico were not included in the study.

The gender distribution among all students was 55 percent female, 45 percent male. Cuban and "Other Hispanics" had this same distribution whereas Mexican Americans/Chicanos and Puerto Ricans were slightly more likely to be female (59 percent and 60 percent, respectively).

Types of Institution Attended. Over one-half of all Hispanic students attended public two-year institutions.[3] (See Table 2.) Hispanic participation at these institutions was 12 percentage points higher than that of all students and was higher than that of any other racial/ethnic subgroup. Hispanics' attendance at proprietary institutions (11.1 percent) was also higher than the percentage of all students attending (5.4 percent) and larger than for any other racial or ethnic group except Blacks. Attendance at 4-year institutions was much lower for Hispanics than for students generally--six percentage points lower at private institutions and 10 percentage points lower at public institutions.

As expected, Hispanic students from different nationality groups showed quite different attendance patterns at these different types of institution. Mexican Americans/Chicanos were more likely than other Hispanic groups to attend public two-year institutions; they were less likely to attend four-year colleges and universities. Puerto Ricans were more likely than Hispanics generally to attend 4-year institutions, attending in about the same proportions as the population in general. Puerto Ricans attended two-year institutions at much lower rates than all students did. Cubans attended private four-year colleges in greater proportions than all students and than any other Hispanic group. Both Cubans and Other Hispanics were somewhat overrepresented at public two-year institutions in comparison to all students. All Hispanic groups except Cubans were overrepresented (relative to all students) at proprietary schools. The differences found reflect, to some extent, the greater availability of public two-year institutions in geographic areas with high concentrations of Mexican Americans/Chicanos. In addition, some differences result from the bifurcated Cuban population in the United States--wealthier, more educated immigrants who left Cuba just after the communist takeover and poorer, less educated immigrants from the Mariel exodus of 1980 (Portes and Truelove, pp. 360 and 363).

Financial Concerns in Selecting Institution. Students' reasons for selecting the college attended provide clues to their financial concerns prior to enrollment. About half the Hispanic attendees indicated that financial considerations were very important in their college selection. (See Table 3.) Greater proportions of Hispanic students selected their institution for cost-related reasons than did any other racial/ethnic group. Hispanic students more often than others cited the following reasons as very important for their choice of institution: the institution was close to home, attending it allowed combining work and study, they could live at home while attending, and the school cost less. Financial aid availability at the institution chosen was considered very important by 38 percent of Hispanics, a level surpassed only by Black students.

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[3] Since most institutions of less than four years' duration are two-year colleges, we use this term when referring to them.

Parents' Education. The most striking feature about Hispanic students' background is the low educational attainments of their parents. About 56 percent of both mothers and fathers had completed high school. (See Table 3.) The relationship of this factor to choice of type of institution should be explored. Certainly, low parental education suggests a probable lack of information about education and financing education and the inability of parents to advise children on appropriate educational choices. Low education is associated with low income. In some instances parents' low educational achievements may translate into low aspirations and expectations for their children. Coupled with low income, this configuration can be devastating to educational achievements of the children.

To help put Hispanics' college-going into perspective, we have tabulated several pieces of descriptive information in Table 3.

Attendance Status. More Hispanics than students from other racial/ethnic groups attended school part-time.

Age. Hispanic students included fewer traditional-age students (60.0 percent) than any other racial/ethnic group, except Blacks.

Dependency. Forty percent of Hispanic students were classified in 1986-87 as financially independent of their parents' resources. Only Black students had a higher percentage of financially independent scholars.

Residence. Hispanic students were more likely to live with their parents (40.1 percent) while attending postsecondary education than were students from any other group. This pattern occurs in spite of the fact that many of these students were financially independent of their parents.

Employment. A greater percentage of Hispanic students (66 percent) than any other racial/ethnic group was employed during the Fall term of 1986-87. They worked, on average, longer hours (30.6), and like other groups, were highly likely to be employed off campus (89.3 percent).

Educational Expectations. Hispanic students' expectations for their own education were lower than those of students from any other racial/ethnic group. (See Table 3.) In particular, they expected to complete a four-year college degree (or obtain yet further education) less often than did others. These lower expectations go hand-in-hand with the large percentage of students attending proprietary and two-year institutions. In their expectations for education, Hispanic students differed little from other students in the same type of institution. (See Table 4.) We should note that expectations were generally higher than the type of program currently attended and they were higher than past educational achievements of such students would lead us to expect.

Year in school. Because large numbers of Hispanics attend schools with short-duration programs, a greater percentage of Hispanic students (5.2 percent more) were in their first year (39.2 percent) of postsecondary school attendance than were students from any other group. (See Table 3.) Hispanics were distributed across years of school essentially the same as other students in the same type of institution. (See Table 5.) In proprietary institutions two-thirds of both Hispanic and other students were in their first year. In two-year institutions about 44 percent were in that year. Slightly more Hispanics than others were in the first year at four-year institutions (public: 22.8 percent versus 22.0 percent; private: 28.0 percent versus 25.8 percent.)

Students' Economics

Next, we show the economic circumstances of Hispanic postsecondary students, their levels of financial need, and the extent to which they received financial aid compared to other racial/ethnic groups. Where sample size is large enough, controls are added for type and control of institution, full-time/part-time status, and dependency status.

Income. The average income (adjusted gross income plus untaxed income) for all students was relatively low, whether they were financially independent of or dependent on the family of origin. (See Table 6.) Among independent students, Hispanics earned more than Blacks and Other Minorities, but less than Whites, who were the majority. Dependent Hispanic students, on the other hand, were in worse economic circumstances than all groups but Blacks.

The situation is even starker if one examines the income distributions. Forty-two (42.5) percent of Hispanic families of dependent students had less than $20,000 income. Only 25.8 percent of all families of dependent undergraduates had this low an income.

Independent undergraduate students' income distributions show the very difficult financial situation for all minority groups and some whites. As many as 24.5 percent of Hispanics, 33.8 percent of Blacks, and 41.4 percent of other minorities had less than $5,000 income. With financial obligations that may extend to others beside themselves, independent students are heavily constrained in their educational choices.

Costs of Education. Hispanic undergraduates, whether aided or not, reported the lowest costs of education of any group.[4] (See Table 7.) Aided students reported significantly higher costs than unaided students did. These costs can be seen in both tuition and fees paid and in room and board costs. The room and board costs reported were those attributable to their education and thus, much lower than the cost of living for nine months.

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[4] The figures on costs are adjusted to apply to full-year, full-time students.

Financial Aid. Hispanic students were slightly more likely (51.9 percent) to receive some financial aid than all students were (48.6 percent). (See Table 7.) Only Black students as a group were more likely to be aided financially (66.7 percent).

In the Fall of 1986-87, 40.9 percent of Hispanic students received some form of federal aid (compared to 34.2 percent of all students); 26.2 percent had Pell grants compared to 17.5 percent of all students. Although lower than for Blacks or Other Minority students, Hispanic aid amounts tended to be higher than average for all students, not surprisingly since Hispanic students' income distributions were also lower.

Receiving aid is a function of income; cost of attendance, which varies by the type and control of institution; attendance and dependency statuses. Whether full-time or part-time, no matter what race or ethnicity, students were most likely to receive aid at proprietary schools, next most at private schools followed by four-year public schools, and last at two-year public schools. (See Table 8.) With one exception, full-time Hispanic students were more likely to be aided than any group but Black students. White students at two-year schools were aided slightly more often than Hispanics. Aid to part-time Hispanic students did not show a consistent pattern when compared with aid to other racial/ethnic groups.

An interesting contrast, especially for Hispanic students, but also for Blacks, is the difference made in the financial aid received by attendance at four-year institutions (public or private) over two-year public institutions. Among full-time attendees, about 20 percentage points more Hispanics (and Blacks) were aided at public four-year institutions than received aid at public two-year institutions. Over 30 percent more Hispanics received aid when attending a private four-year institution over a public two-year college. While these differences are likely to be a result of the added costs of such institutions, the additional aid may make them accessible. Although more White and Other Minority students were aided at private four-year institutions than at two-year institutions, the effect was somewhat smaller.

Part-time students gained less additional aid for attending four-year over two-year institutions. Among part-time Hispanic students, about 11 percentage points more four-year college attendees received aid than did two-year attendees in the public sector and 20 percentage points more private-sector four-year college attendees than the public two-year attendees.

Hispanic students incurred a large penalty in lost student aid for attending part-time. At private four-year institutions 33 percentage points more full-time Hispanic students were aided than such part-time students. This difference is 31 percentage points at public four-year schools and 22 percentage points at public two-year institutions.

Hispanic students who were financially dependent upon their parents fared better in obtaining student aid than did financially independent students, probably partly because of a greater likelihood of attending school full-time. When attendance status is controlled in Table 9, the advantage of dependence among this group is clearer. Twenty percentage points more of the full-time dependent Hispanic students received aid than did such independent students. This differential holds also for Whites and Other Minorities. Among part-timers Hispanic dependent students were much more likely than independents (12.7 percentage points) to receive aid. This differential was greater for Hispanics than for any other group.

Conclusion

These data from NPSAS 87 have proved valuable for documenting factors previously suspected of being detrimental to Hispanics' four-year college attendance: parental lack of education, low income, low educational expectations, part-time attendance, and working long hours while attending classes. This study also shows that Hispanic students' attendance patterns and work habits are detrimental to their receiving financial aid.

Even though the story is already fairly clear, more analysis should be carried out to disentangle multivariate relationships. These data could be explored further to show the specific kinds of aid available to Hispanics and the extent to which aid received covers their financial need.

In approaching a study with NPSAS 87 data one should remember their limitations--they are cross-sectional and cover only one point in time. To facilitate research on Hispanic students' educational financing, in the next NPSAS survey the list of nationalities of Hispanics should include Central and South Americans. The expansion of the sample of NPSAS 90 institutions to include those in Puerto Rico should provide much better data on Puerto Rican students.

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Table 1. Distribution of Hispanic undergraduate students by nationality and gender

Nationality	Male	Female
Mexican American/Chicano	52.0	55.1
Puerto Rican	8.3	9.2
Cuban	5.3	5.0
Other Hispanic	34.4	30.7
Total	100.0	100.0

Table 2. Distribution of undergraduates across types of institution for each Hispanic nationality and other racial/ethnic groups

	Public		Private		Proprietary	Total
Nationality	2-Year	4-Year	2-Year	4-Year		
Mexican American/Chicano	57.6	23.8	0.4	4.8	13.3	99.9
Puerto Rican	29.3	34.8	1.4	19.9	14.6	100.0
Cuban	44.4	28.5	1.1	23.8	2.3	100.1
Other Hispanic	45.2	31.5	0.7	15.0	7.6	100.0
All Hispanics	50.4	27.5	0.6	10.4	11.1	100.0
Blacks	38.6	34.1	1.3	14	11.9	99.9
Other Minorities	42.6	37.4	2.4	13.6	4	100.0
Whites	37.2	39.4	1.3	17.9	4.2	100.0
All Students	38.5	38.0	1.3	16.8	5.4	100.0

Table 3. Descriptive characteristics of undergraduate students by race/ethnicity

Characteristic	Hispanics	Blacks	Other Minorities	Whites	All
Reasons Selected Institution (% who say very important)					
Work & study possible	55.4	50.2	39.3	46.1	46.7
Could live at home	50.3	43.8	37.2	41.4	42.0
School cost less	44.5	43.8	39.1	38.5	39.4
Close to home	42.2	39.3	37.1	39.7	39.7
Financial aid available	37.8	44.5	31.5	23.6	27.0
Less other cost	29.7	31.2	29.2	29.2	23.7
Parents' Education (%)					
Father completed H.S.	55.5	66.8	72.3	82.2	78.4
Mother completed H.S.	56.5	70.1	69.4	82.6	78.9
Attendance (%)					
Full-time	58.1	63.0	61.2	62.5	62.2
Part-time	41.9	37.0	38.8	37.4	37.8
Age (%)					
18-24	60.0	56.5	63.1	64.9	63.7
Gender (%)					
Male	42.3	36.3	51.0	45.6	44.8
Female	57.7	63.8	49.0	54.4	55.2
Dependency (%)					
Dependent	60.0	55.9	65.2	64.0	63.0
Independent	40.0	44.1	34.8	36.1	37.0
Residence (%)					
On-campus	50.3	48.0	46.1	51.0	50.4
With Parents	40.1	33.0	36.2	28.1	29.8
Off-campus	9.6	19.1	17.7	21.0	19.8
Fall Employment (%)	66.2	60.0	58.0	64.5	63.8
Ave. Hours/Week	30.6	29.5	27.0	29.2	29.2
Location (%)					
College work-study	8.6	9.6	14.4	9.6	9.8
Other campus work	0.6	0.7	0.4	0.5	0.5
Off-campus work	89.3	87.1	81.0	88.9	88.4
Highest Level Education Expected (%)					
Vocational, Trade, Business	7.5	7.0	4.9	5.4	5.6
<2 years college	4.2	2.6	2.7	2.3	2.4
2 years or more college	14.2	12.5	12.0	11.1	11.5
4-year college degree	39.5	32.6	37.6	40.1	39.2
Master's degree	19.8	29.1	24.1	28.3	27.5
Ph.D. or M.D.	10.4	12.4	14.5	10.1	10.6

Table 3 continued

Year in School (%)					
1	39.2	38.0	32.9	33.2	34.0
2	26.0	27.1	26.2	25.7	25.9
3	14.0	14.9	14.8	16.5	16.1
4	9.1	10.6	11.7	13.0	12.4
5 or more	8.4	7.3	12.6	10.1	9.9

Table 4. Highest level of schooling expected by type and control of institution

Type of School	Private 4-Year		Public 4-Year		Public 2-Year		Proprietary	
	Hisp	Other	Hisp	Other	Hisp	Other	Hisp	Other
Vocat., Trade, Bus.	0.8	0.5	0.4	0.3	6.1	8.7	37.3	37.3
<2-Year College	1.3	0.7	0.3	0.5	5.2	4.3	11.3	7.0
2-Year College Deg.	3.4	2.9	3.2	2.4	22.1	22.9	16.0	19.3
4-Year College Deg.	34.8	37.1	43.9	44.8	43.4	37.2	16.0	19.8
Master's Degree	32.9	39.8	34.2	36.7	12.0	17.0	6.7	7.3
Ph.D., M.D., etc.	24.6	17.5	16.0	13.7	6.2	5.6	2.5	1.8
Not specified	2.1	1.6	2.1	1.6	5.1	4.4	10.2	7.6

Table 5. Distribution of undergraduate students by year in school and type and control of institution

Year in School	Private 4-Year		Public 4-Year		Public 2-Year		Proprietary	
	Hisp	Other	Hisp	Other	Hisp	Other	Hisp	Other
1	28.0	25.8	22.8	22.0	44.5	44.1	66.0	66.8
2	20.1	22.7	20.9	21.1	33.2	33.4	11.4	16.0
3	25.2	22.8	22.6	23.2	9.4	7.9	3.4	4.4
4	20.2	20.1	20.4	20.7	2.1	2.6	2.5	2.8
5+	6.1	8.3	12.8	12.7	7.2	8.9	5.5	5.1
unspec.	0.4	0.3	0.5	0.3	3.6	3.1	11.2	4.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 6. Income of undergraduate students by race/ethnicity

	Hispanics	Blacks	Other Minorities	Whites	All
Income					
Dependent	$27,066	$22,240	$33,434	$42,968	$39,619
Independent	$16,555	$15,103	$14,312	$21,838	$20,273
Dependent Income (percentage)					
$0-10,000	19.8	28.0	19.9	7.7	11.0
$10,001-20,000	22.7	27.0	18.5	12.6	14.8
$20,001-30,000	25.0	20.5	19.1	17.0	17.9
$30,001+	32.5	24.7	42.5	62.9	56.4
Total	100.0	100.2	100.0	100.2	100.1
Independent Income (percentage)					
$0-5,,000	24.5	33.8	41.4	21.4	24.2
$5,000-10,000	19.5	16.5	16.2	12.5	13.6
$10,001-20,000	23.9	23.9	16.0	20.5	20.8
>$20,001	32.0	25.9	26.5	45.7	41.4
Total	99.9	100.1	100.1	100.1	100.0

NOTE: Income is measured by constructed variables DEP_INC and IND_INC, which combine adjusted gross income with untaxed income. It comes from both records and self-report. Missing data are imputed.

Table 7. Costs of education and financial aid for undergraduate students by race/ethnicity

	Hispanics	Blacks	Other Minorities	Whites	All
Total Cost					
Aided	$4,507	$4,677	$5,149	$4,916	$4,869
Unaided	$2,336	$2,523	$3,123	$2,895	$2,851
Both	$3,461	$3,955	$4,049	$3,832	$3,831
Tuition & Fees (adj. to full-year)					
Aided	$2,015	$2,047	$2,277	$2,409	$2,326
Unaided	$656	$692	$1,142	$1,198	$1,129
Both	$1,362	$1,596	$1,665	$1,758	$1,710
Room & Board					
Aided	$1,133	$1,180	$1,496	$1,367	$1,333
Unaided	$666	$645	$925	$803	$793
Both	$910	$1,003	$1,189	$1,064	$1,056
Aid (Percent Receiving)					
Received	51.9	66.7	46.2	46.3	48.6
Federal Aid	40.9	55.5	33.6	31.5	34.5
Title IV	38.5	52.0	31.0	29.2	32.1
Federal Grant	33.1	47.0	28.2	20.9	24.6
Pell Grant	26.2	39.6	21.8	13.8	17.5
Federal Loan	23.4	32.6	17.1	22.2	23.0
State Aid	17.1	20.1	17.7	13.7	14.8
Institutional	14.7	18.1	18.8	17.9	17.7
Amount of Aid (in dollars)					
Pell Grant	$1,414	$1,492	$1,463	$1,352	$1,397
Grant Aid	$2,271	$2,302	$2,860	$2,118	$2,200
Loan Aid	$2,335	$2,140	$2,241	$2,302	$2,279
Work-Study	$1,115	$1,153	$1,092	$1,023	$1,053
Total Aid	$3,145	$3,380	$3,659	$3,047	$3,132

Table 8. Percent of undergraduate students aided by race/ethnicity, attendance status, and type and control of institution

Full-time

Race/Ethnicity	Public 4-Year	Public 2-Year	Private 4-Year	Private 2-Year	Proprietary	All
Hispanic	67.6	47.7	79.8	81.3	91.6	65.8
Black	81.5	62.9	90.3	85.7	95.2	81.1
Other Minorities	57.2	44.8	67.3	82.8	80.3	56.9
White	51.1	48.9	72.8	72.6	82.5	57.7

Part-time

Race/Ethnicity	Public 4-Year	Public 2-Year	Private 4-Year	Private 2-Year	Proprietary	All
Hispanic	36.6	25.7	46.2	65.3	87.8	32.4
Black	48.4	35.0	61.3	51.4	85.1	42.2
Other Minorities	38.0	19.8	36.4	66.9	97.8	29.3
White	30.7	22.0	43.0	50.3	69.1	27.3

Table 9. Percent of undergraduate students aided by race/ethnicity, attendance status, and dependency status

Race/Ethnicity	Full-time			Part-time		
	Indep	Dep	All	Indep	Dep	All
Hispanic	59.7	79.3	65.8	25.8	38.5	32.4
Black	78.9	85.2	81.1	37.1	45.5	42.2
Other Minorities	49.7	75.7	56.9	26.1	33.0	29.3
White	53.1	74.1	57.7	23.3	29.9	27.3

RESULTS FROM THE NEW YORK STATE AUGMENTATION OF THE 1986-87 NATIONAL POSTSECONDARY STUDENT AID STUDY

by

Thomas J. McCord, Ph.D., Glenwood L. Rowse, Ph.D.
and Nancy Willie-Schiff, Ed.D.

New York State Education Department
Office of Postsecondary Education Policy Analysis

Introduction

New York was the only state to obtain an augmented sample in the 1986-87 National Postsecondary Student Aid Study (NPSAS) conducted by the U.S. Education Department's National Center for Education Statistics (NCES). The augmentation provided a rich source of information about students' background characteristics, their college expenses and their sources of support, including financial aid.

The augmentation was done because the national sample would not have adequately represented the unique features of New York's postsecondary system: the nation's largest state need-based grant program, the Tuition Assistance Program (TAP); a student aid volume of over $2.7 billion annually from State, federal, institutional and private sources; two distinctive public university systems; and an independent sector that enrolls over one-third of the State's undergraduates and that spends more on institutionally funded grants than is spent by either TAP or Pell in the State.

This paper describes the data obtained from the New York augmentation and presents highlights of initial findings. Further information can be obtained from the authors at the New York State Education Department, 5B44 CEC, Albany, NY 12230.

The Data

Like many other data sources, the augmentation file is not perfect. It is not as large, as customized or as "clean" as it might have been. Nonetheless, it is a uniquely comprehensive and timely database about postsecondary students that can be, and has been, used to examine a wide range of policy questions.

The population. The national NPSAS sample was drawn to represent students at postsecondary institutions participating in federal student assistance programs who were enrolled in the fall of 1986 in credit-bearing courses or programs of study leading to a degree or formal award in a vocational or occupationally specific program. As such, the sample represents full-time and part-time students at all levels of study in public, private non-profit and private for-profit institutions.

The augmentation sample was designed so that it could be poststratified to represent the five distinctive sectors of postsecondary education in New York: the State University of New York (SUNY), The City University of New York (CUNY), independent institutions, degree-granting proprietary schools and proprietary schools without authority to grant degrees.

Sample size. The augmentation sample contained 173 institutions, of which 112 had degree-granting authority and 61 did not. Among the eligible institutions in the sample, 93 percent of the degree-granting institutions participated and 69 percent of the non-degree schools partipated, for a final sample of 137 institutions.

From the participating institutions, 8,062 students were selected for the student sample. Of those eligible to be in the study, 5,517 responded to student questionnaires after extensive follow-up by the federal contractor. The final New York sample contained questionnaire responses supplemented by data from registrar office records, financial aid office records and parent questionnaires for 5,517 student cases.

The overall statewide response rate, the product of institutional and student response rates, was 70 percent. Response rates were higher at degree-granting institutions (76%) than at non-degree schools (48%).

The augmentation sample had originally been designed to contain approximately 5,000 more student cases than the usable sample actually contained. Undersampling occurred at CUNY schools, at private for-profit schools and among part-time students. The number of respondents shown in Table 1 indicates how the statewide sample size gets smaller as student populations are defined more narrowly. Table 2, showing the distribution of full-time, full-year dependent degree-credit undergraduate cases for several variables, further demonstrates the limiting factor of sample size for analyses of subgroups of students. For example, there are not enough student cases to do analyses of students by sector of enrollment and income for all institutional sectors.

Estimation weights. NCES and its contractor, Westat, Inc., assigned weights to cases in the New York student sample to reflect the number of students in the population that each sample case represented. The weights were based on the probabilities of being selected at each stage in the sampling design and made adjustments for nonresponse and for other features of the sample. All analyses of the New York sample were based on weighted cases.

Sampling error. The federal contractor provided New York with estimates of sampling error for many variables and many student groups because no generalized sampling error could be developed for the entire sample. Those estimates suggest that wide confidence intervals may surround point estimates for subgroups of students but that statewide estimates are more reliable. As a result, findings should be interpreted with some caution.

Variables and measurement error. The analysis file contains approximately 1,000 variables on students' demographic and economic characteristics, educational expenses, financial resources and attitudes based on items in student questionnaires, institutional records and parent questionnaires.

NCES and Westat did thorough editing of the NPSAS data but the New York analysis file required extensive additional editing. When measurement error was widespread or item response rates were unacceptably low, data were corrected or imputed. For example, imputed values for nontuition college cost components were used for special studies of net prices.

NCES constructed several key analysis variables on the national and New York files. As analyses required, other composite variables were constructed on the New York file. Figure 1 illustrates how variables, data sources and units of analysis intersected for analyses of student prices in New York.

Validity. Aside from limitations imposed by sample size, item nonresponse and some measurement error, the weighted New York sample adequately represents the student population for many purposes. Especially for undergraduates, population estimates based on the sample corresponded closely to estimates from other primary sources. For example, average college costs from NPSAS were close to averages computed from institutional surveys, as shown in Table 3.

Findings about Undergraduates

With as rich a data source as the NPSAS sample, many policy issues can be examined. Selected findings about undergraduates obtained from the New York sample are highlighted here.

Student diversity. As Table 4 reveals, New York's postsecondary institutions serve a diverse undergraduate population with many "nontraditional" students. Not all undergraduates fit the stereotype of being young, full-time students who rely on parental support and live in college-owned dormitories. This diversity should be taken into account by policymakers although most of New York's analyses had to be focused on traditional students because of data limitations.

Costs of attendance. Average annual expenses for full-time, full-year undergraduates living in campus-owned housing were approximately twice as high in private non-profit institutions as they were in comparable public institutions, as illustrated by Figure 2. Attendance costs in New York were similar to national costs.

Aid utilization. Figure 3 emphasizes a major difference between New York, where 60% of undergraduates received financial aid, and the nation, where 46% were aided. New York's aid utilization rates were dramatically higher for federal and state aid programs but only slightly higher for institutionally funded aid. The State's undergraduates made greater use of both federal grants and federal loans than their national counterparts.

The greatest difference in aid utilization between New York and the nation was at public institutions. Figure 4 shows that undergraduates enrolled in public institutions in New York were more likely to receive some aid (55%) than public sector students across the country (38%). The probability of receiving aid at private institutions in New York was only slightly higher than in other states.

Black and Hispanic undergraduates were more likely to be aid recipients than either white or Asian American undergraduates, as shown in Figure 5. The probability of receiving aid was higher in New York than in the nation for members of every racial/ethnic group.

Award size. Although New York's undergraduates were more likely to receive aid than their counterparts in other states, they received, on average, the same amount of aid as recipients elsewhere. Figure 6 shows the small differences in average award amounts from major aid sources.

Average award size among full-time, full-year dependent undergraduates varied with income in expected ways, as Figure 7 illustrates. Average award size did not vary with income for either loans or work-study. In contrast, average grants decreased as family income increased. The average Pell Grant and TAP Award decreased as income increased, Pell more dramatically than TAP, while the average institutionally funded grant was likely to be highest for middle income recipients.

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All sources of support. With high aid rates in New York, a smaller percentage of the State's undergraduates relied exclusively on personal and family resources to finance college (36%) than in the nation (47%), as Figure 8 reveals. Nonetheless, family resources were an important source of support in New York. Parents of full-time, full-year dependent undergraduates covered 85% of unaided students' expenses (an average of $7,789) and 45% of aided students' expenses (an average of $4,449), as shown in Figure 9. Among aided students, expenses were covered by a combination of many sources, with one in four dollars supplied by grants, as Figure 10 shows.

Remaining need. Despite the high utilization of grant and loan programs in New York, there were large amounts of remaining need among full-time, full-year dependent aid recipients at all income levels and for all racial and ethnic groups, as shown in Figure 11. Remaining need was defined as budgeted expenses for tuition, fees, books, supplies and living expenses reduced by expected family contributions as well as grants and loans. After grants and family contributions were considered as resources, remaining need exceeded $3,000 for nearly half of the full-time dependent undergraduates. Even after student borrowing was added to grant aid and family contributions, average remaining need in New York was over $800 and about half of the aid recipients had a remaining need in excess of $1,000.

Student employment. Although the NPSAS data do not reveal exactly how undergraduates and their families were financing their share of educational costs, the data indicate that undergraduates were employed at high rates. More than 85% of New York's full-time undergraduates were gainfully employed during the summer of 1986 or during the 1986-87 academic terms. Over 70% of full-time undergraduates had term-time employment, as shown in Figure 12. These students worked an average of more than 20 hours per week. Figure 13 shows that among employed full-time undergraduates, those most likely to work more than 20 hours per week were adults, blacks and Hispanics. Among full-time dependent aid recipients, those from families with incomes below $12,000 were less likely to work that higher income aid recipients, but, if they worked, they were likely to work more than the average number of hours per week.

Conclusions

New York's augmentation of the 1986-87 National Postsecondary Student Aid Study provided valuable information about student financing and a wide range of other policy issues. Dispelling some myths and confirming others, the NPSAS data have been, and will be, used to inform policy debates and to respond to questions posed by elected officials, members of the higher education community and the public.

New York's experience as a state participant in the 1986-87 national study may be instructive for other states who are considering augmentations in future NCES studies. The major advantage of augmentation is having state level data that is directly comparable to national data. Another advantage is access to the expert services of federal contractors.

The disadvantages of augmentation result from the marginal influence states have in the design of national studies. To minimize this problem, states considering augmentation should carefully define their research goals, determine the sample characteristics they would need to achieve those goals and contract with NCES to get the best sample they can afford. States should also be prepared to allocate adequate staff to work closely with NCES and its contractor during the design, data collection and editing phases of the study.

States might also press for greater participation in the design and implementation of national studies. Their participation could lead to better data collection instruments, improved rates of institutional participation and wider use of the data for policy development. Collaboration between federal and state researchers would enhance the value of national studies for both levels of government.

Table 1

NEW YORK STATE AUGMENTATION

SAMPLE COUNTS OF RESPONDENTS

All Respondents (Institutional Records)	8,062
All Respondents (Students Surveys With Records)	5,517
Undergraduates	4,001
Full-Time Undergraduates	3,183
Full-Time Degree Credit Undergraduates	2,911
Full-Time, Full-Year, Dependent, Degree Credit Undergraduates	2,022

Table 2

NEW YORK STATE AUGMENTATION

SAMPLE COUNTS OF FULL-TIME, FULL-YEAR, DEPENDENT, DEGREE CREDIT UNDERGRADUATES

By Sector/Level Of Institution	
SUNY 4-Year	322
SUNY 2-Year	119
CUNY 4-Year	108
CUNY 2-Year	6
INDEPENDENT 4-Year	1,377
INDEPENDENT 2-Year	23
PROPRIETARY	87
	2,022

By Race/Ethnicity	
Asian	106
Black	150
Hispanic	116
White	1,633
	2,005
Missing	17
	2,022

By Family Income (Aided)	
<$11,000	174
$11,000-$19,999	250
$20,000-$29,999	253
$30,000-$30,999	258
$40,000-$49,999	180
$50,000 +	255
	1,370
Missing/Nonaided	652
	2,022

By Residence	
School-Owned	1,069
Off-Campus	264
With Parents	688
	2,021
Missing	1
	2,022

Table 3

Comparison of HEDS and NYPSAS Estimates of Full-Time, Full-Year Dependent Undergraduate Expenses in 1986-87 by Institutional Category

	HEDS Estimates	NYPSAS Estimates
Average Annual Undergraduate Tuition and Required Fees		
SUNY Four-Year or More [1]	$1,483	$1,460
SUNY Two-Year	$1,348	$1,354
CUNY Four-Year or More	$1,337	$1,375
CUNY Two-Year	$1,290	$1,146
Independent Four-Year or More	$7,412	$6,937
Independent Two-Year	$4,083	$5,405
Degree-Granting Proprietary	$4,565	$4,984
Average Annual Total Student Expenses [3]		
SUNY Four-Year or More [1]	$5,994	$5,760
CUNY, Total [2]	$4,428	$3,838
Independent, Total	$12,608	$12,175
Degree-Granting Proprietary [2]	$8,207	$7,433

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[1] Excludes statutory colleges.

[2] Assumes student is a commuter living at home. All others assume on-campus housing.

[3] HEDS estimates taken from the 1988 edition of SED's annual Report on Student Aid.

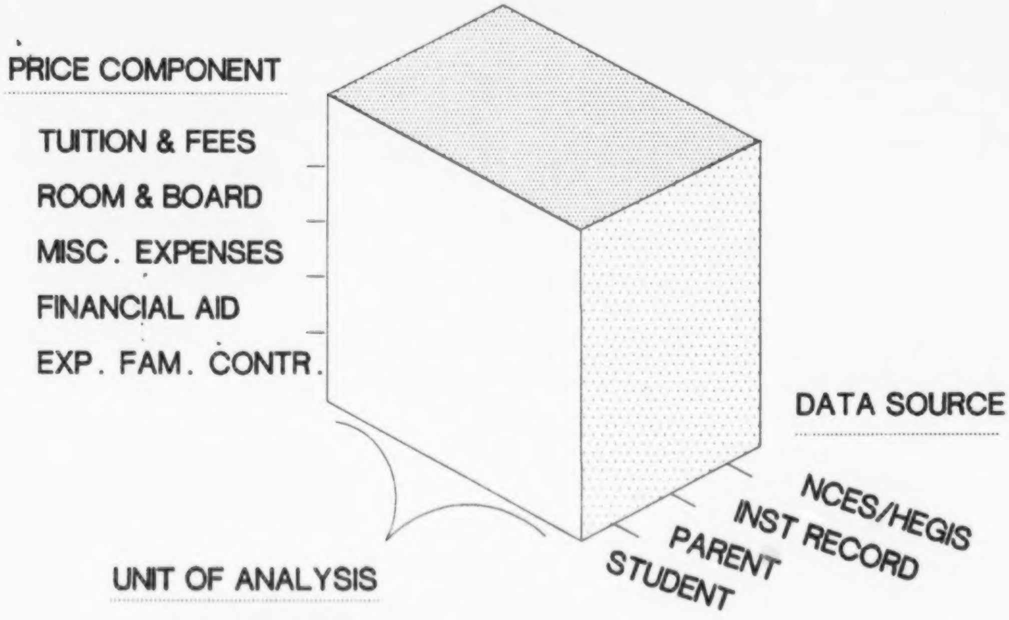
Table 4

UNDERGRADUATE CHARACTERISTICS BY INSTITUTIONAL GROUP

	DEGREE-GRANTING	NON-DEGREE
	(PERCENT OF UNDERGRADUATES)	
Female	**57%**	**78%**
Age 24+	**30%**	**57%**
Underrepresented Minority	**22%**	**55%**
Married	**14%**	**23%**
Self-Supporting	**40%**	**62%**
Part-Time	**26%**	**22%**
Living On-Campus	**28%**	**9%**
Living With Parents	**35%**	**41%**

FIGURE 1

VARIABLES USED TO EXAMINE COLLEGE COSTS & NET COSTS



INTERSECTIONS OF:

- INSTITUTION TYPE
  - INDIV. INSTS.
  - SECTORS
  - REGIONS
  - ETC
- STUDENT TYPE
  - RESIDENCE
  - RACE/ETHNICITY
  - INCOME
  - ETC

FOR FULL-TIME, FULL-YEAR UNDERGRADUATES

FIGURE 2

AVERAGE STUDENT REPORTED EXPENSES FOR FULL-TIME FULL-YEAR UNDERGRADUATES IN SCHOOL-OWNED HOUSING AT FOUR-YEAR INSTITUTIONS, 1986-87

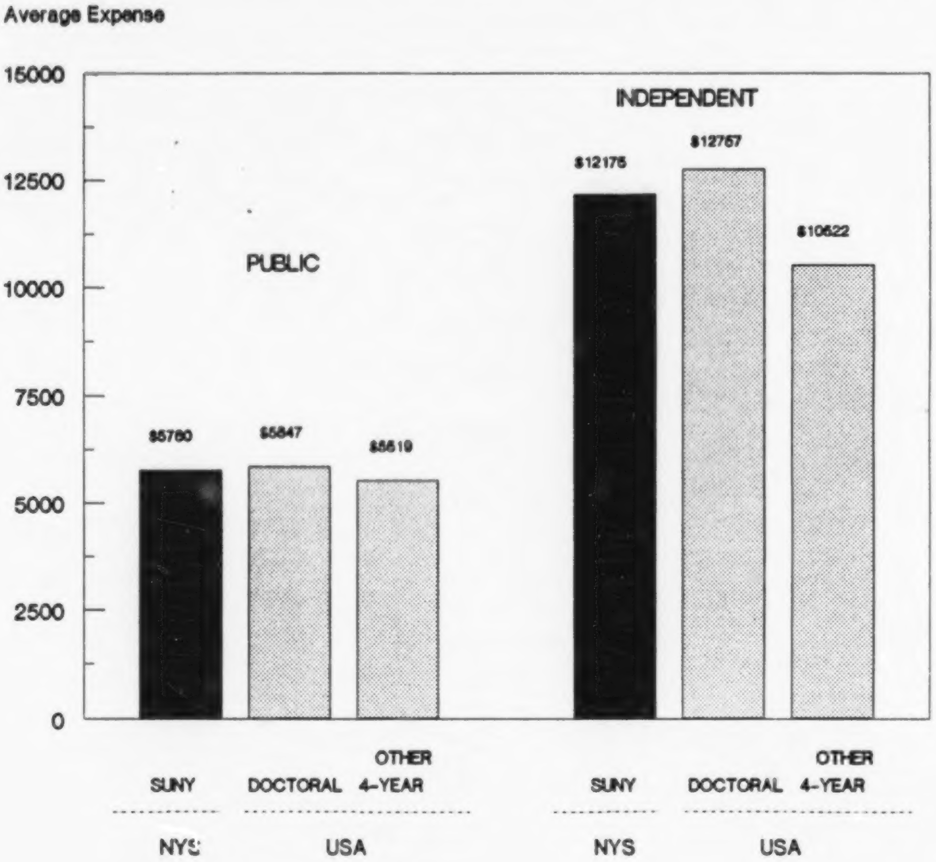


FIGURE 3

AID UTILIZATION RATES ARE HIGHER IN NYS THAN NATIONALLY FOR ALL MAJOR SOURCES OF AID

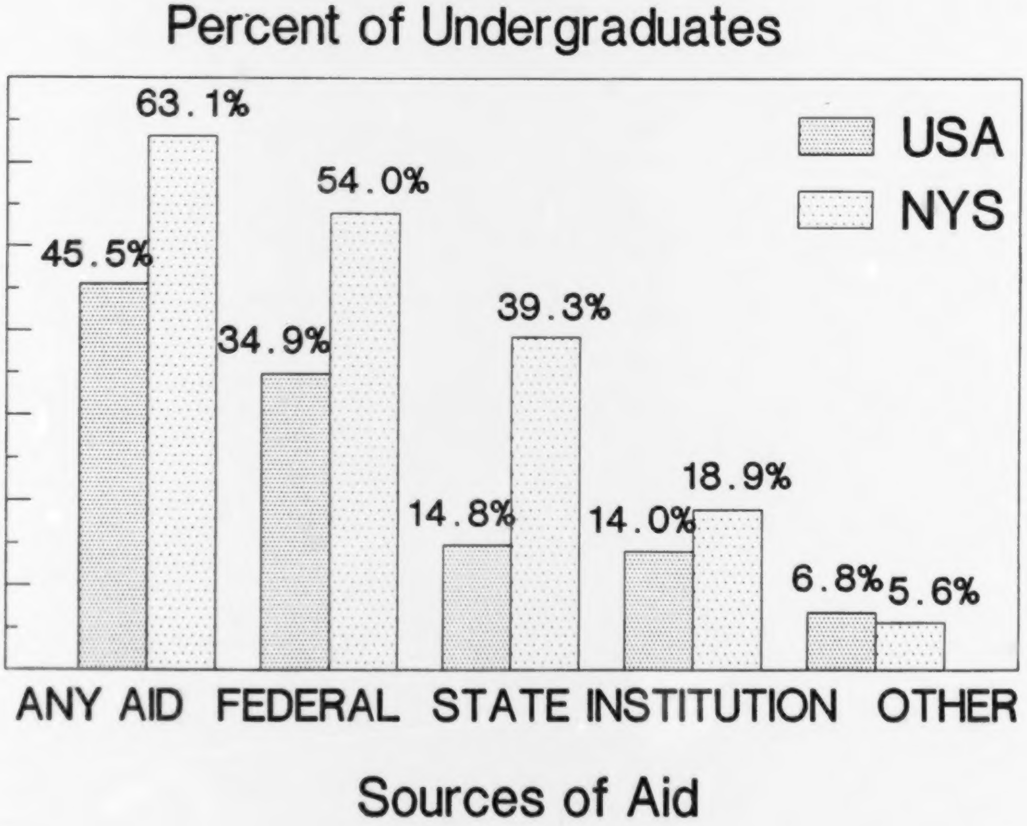


FIGURE 4

More undergraduates receive aid in the Independent & Proprietary sectors than in the Public sector.

The greatest difference between NYS and the US is in the Public Sector.

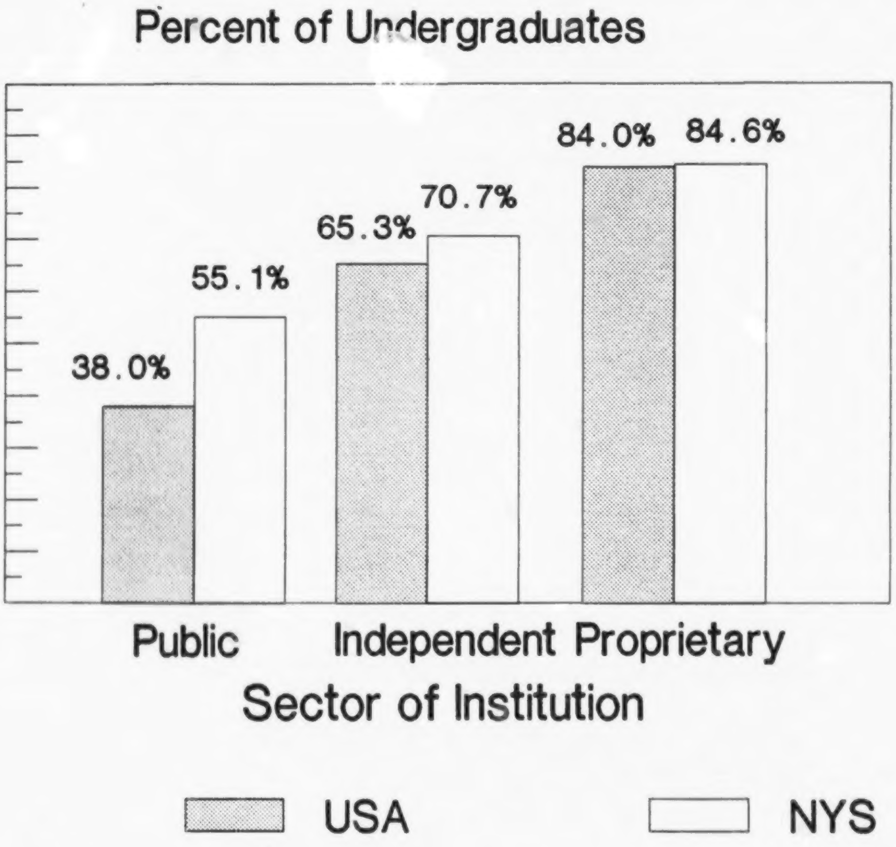


FIGURE 5

UNDERGRADUATE RECIPIENTS OF FINANCIAL AID BY RACE/ETHNICITY, USA & NYS 1986-1987

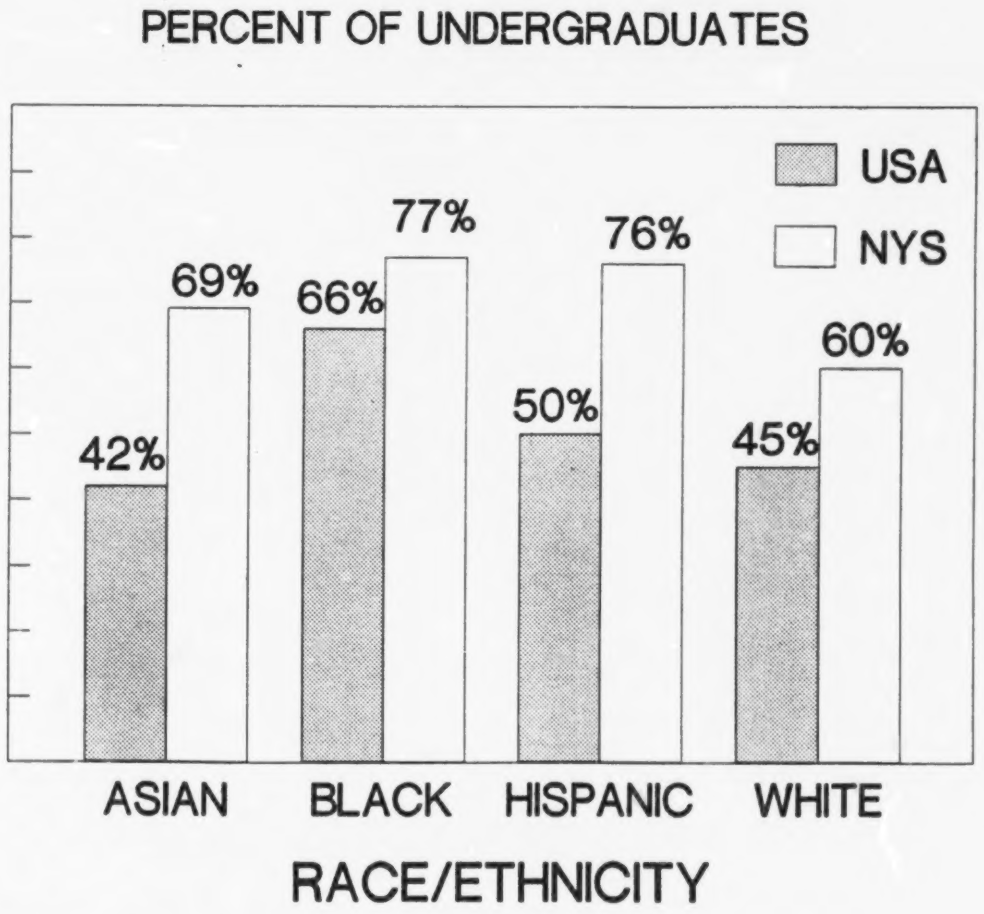


FIGURE 6

AVERAGE AWARD AMOUNTS ARE ROUGHLY EQUIVALENT IN NYS & USA FOR ALL AID SOURCES AND IN ALL SECTORS

FULL-TIME FULL-YEAR STUDENTS

AVERAGE UNDERGRADUATE AWARDS

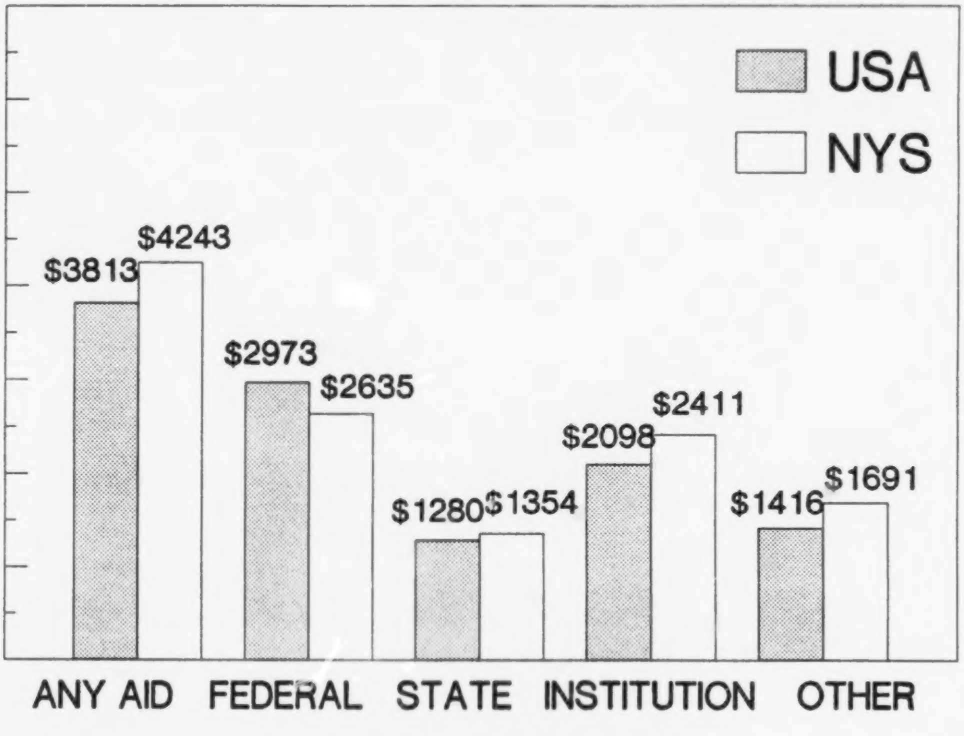
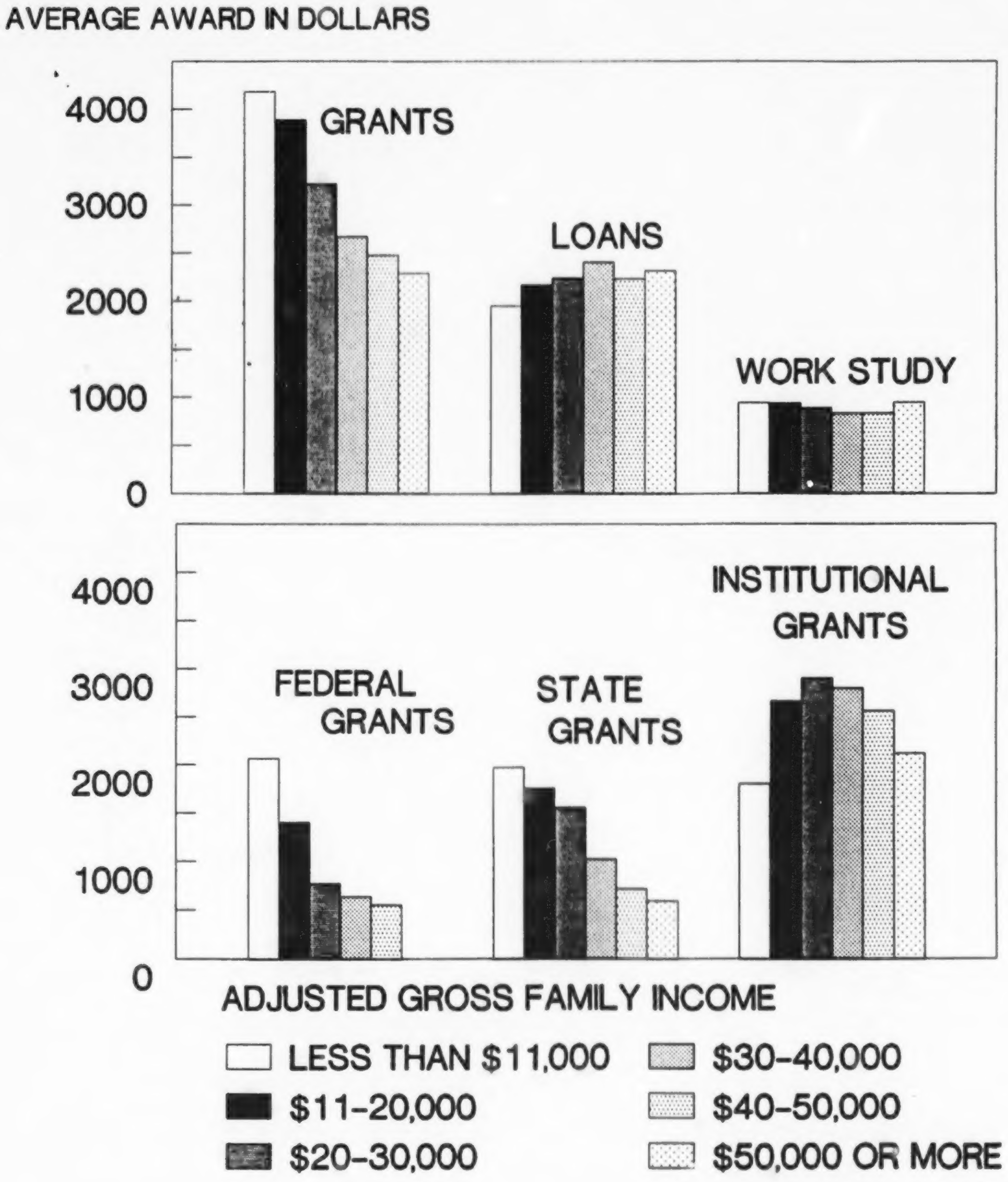


FIGURE 7

NEW YORK STATE AVERAGE AWARD LEVELS BY FAMILY INCOME , 1986-87



FULL-TIME, FULL-YEAR DEPENDENT UNDERGRADUATES

FIGURE 8

SOURCES OF UNDERGRADUATE FINANCIAL SUPPORT

PERCENT OF UNDERGRADUATES

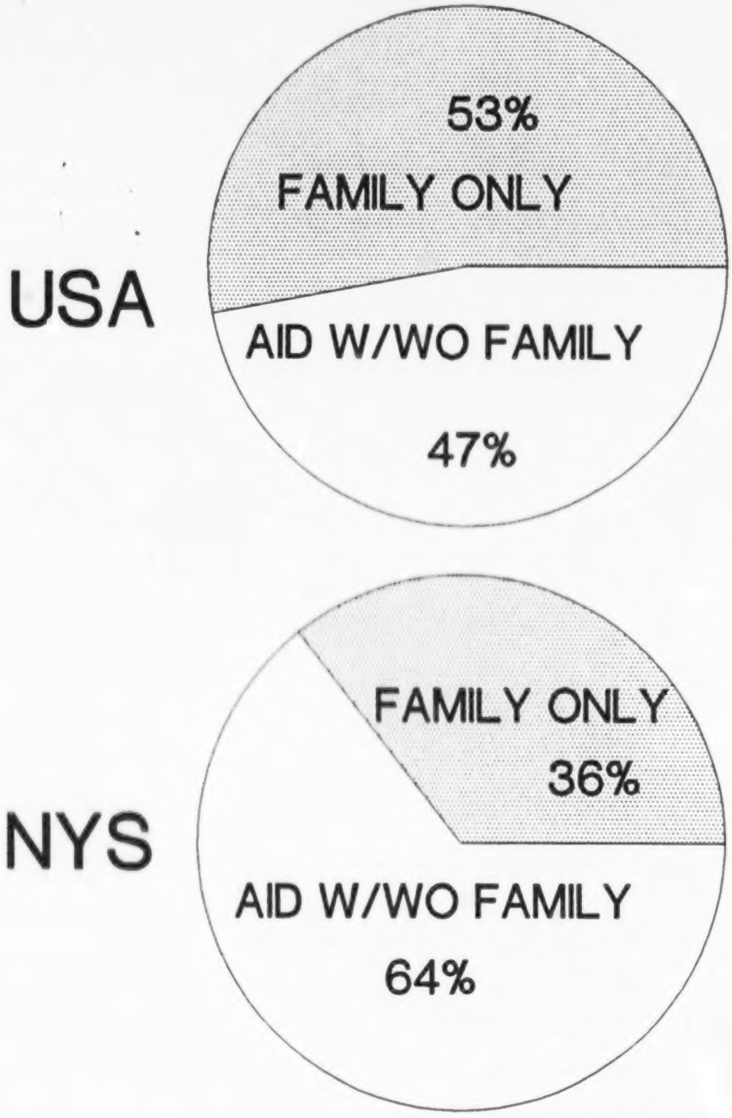


FIGURE 9

PARENTAL CONTRIBUTIONS TO COLLEGE EXPENSES FOR FULL-TIME, FULL-YEAR DEPENDENT UNDERGRADUATES

1986-87

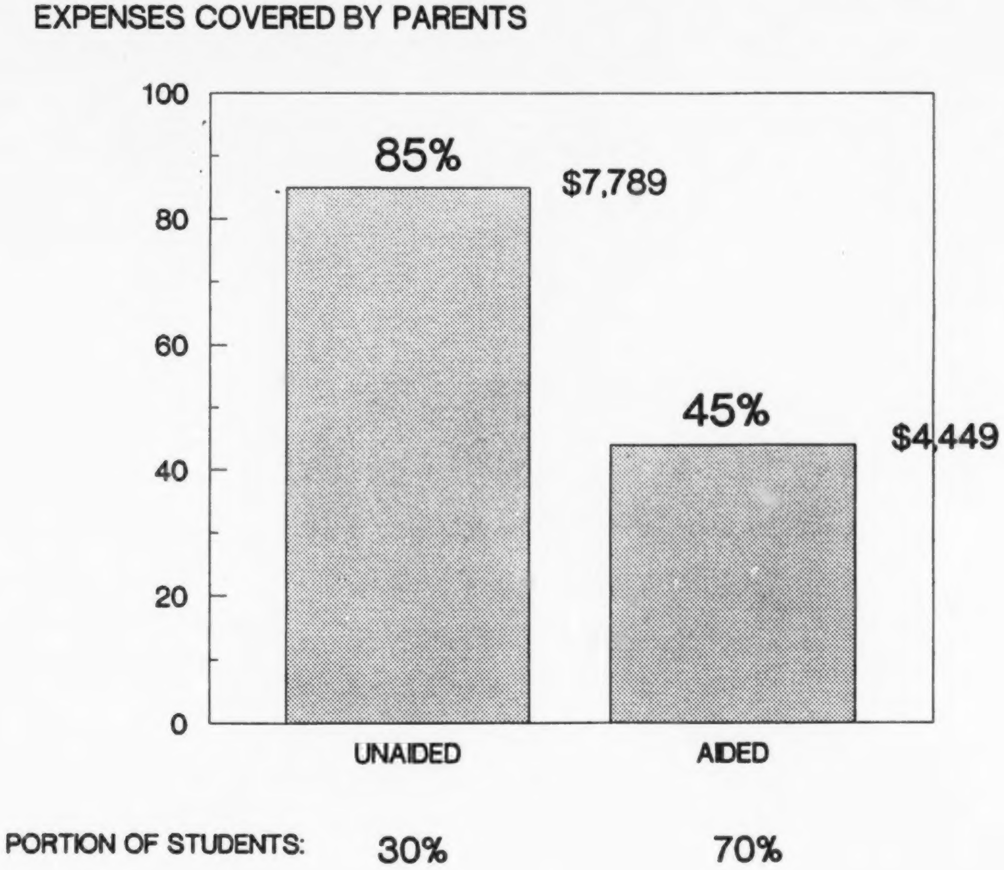


FIGURE 10

RESOURCES USED TO COVER COLLEGE EXPENSES FULL-TIME, FULL-YEAR DEPENDENT UNDERGRADUATES 1986 - 87

AIDED STUDENTS

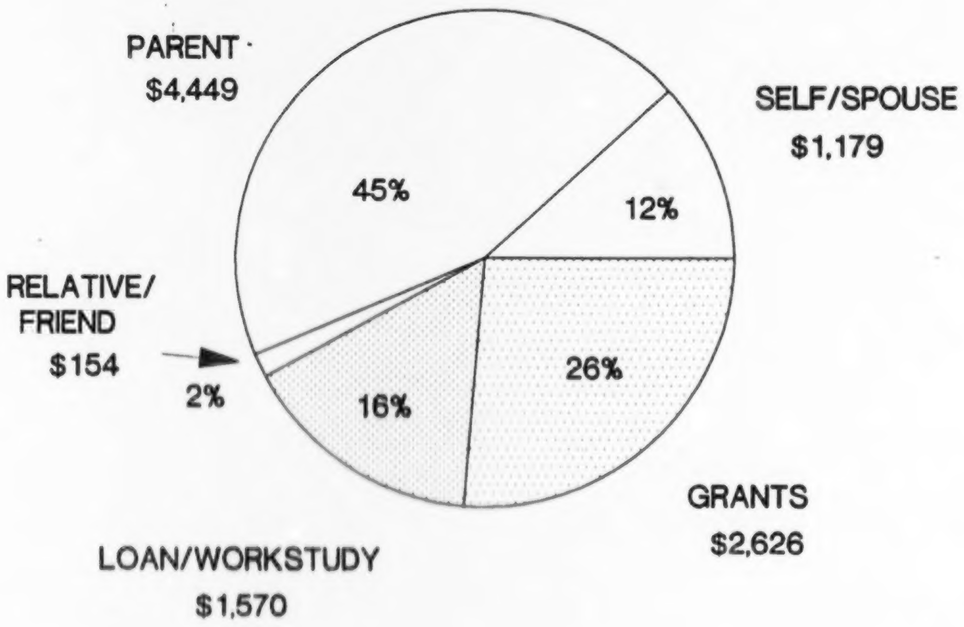


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FIGURE 11

REMAINING COST AFTER GRANTS AND FAMILY CONTRIBUTION

Percentage of Students With Varying Amounts of Remaining Costs

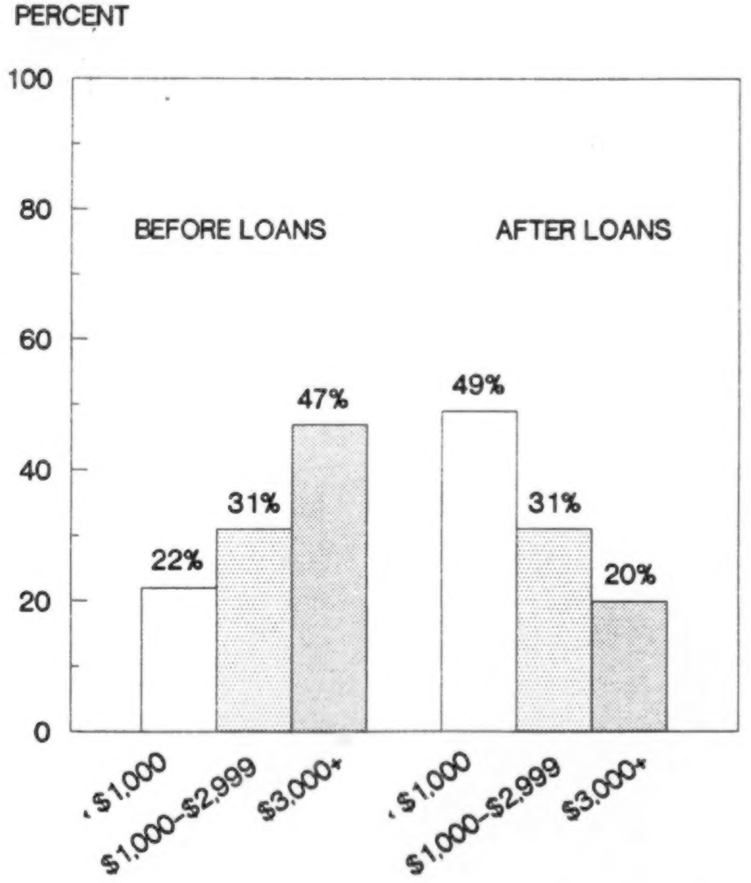


FIGURE 12

Periods of employment
of New York State undergraduates

Full-time undergraduates

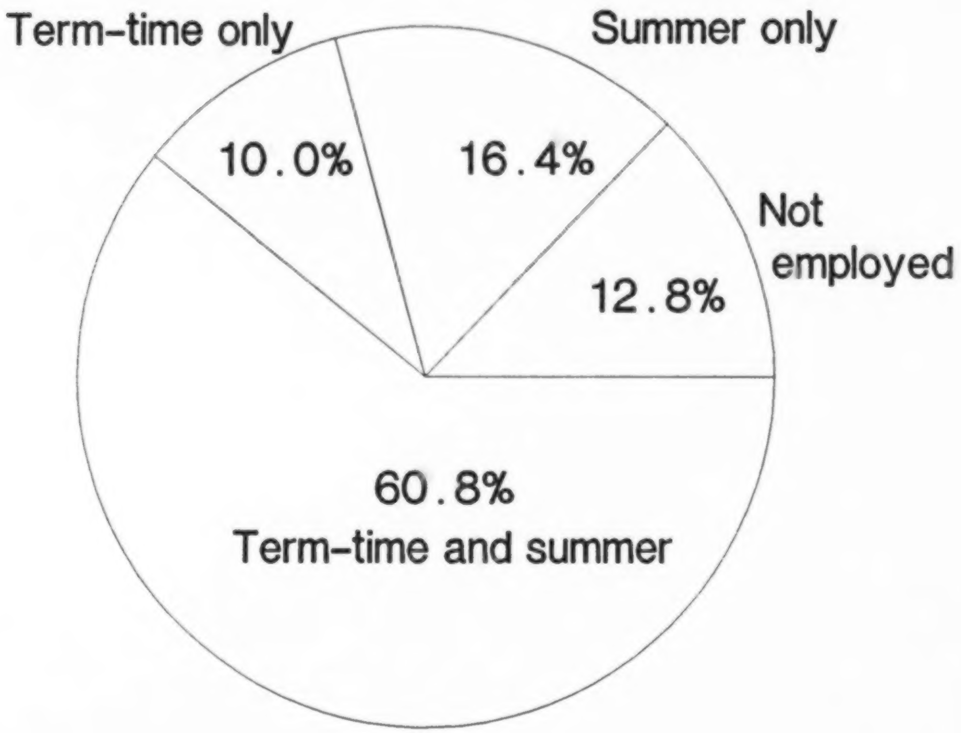
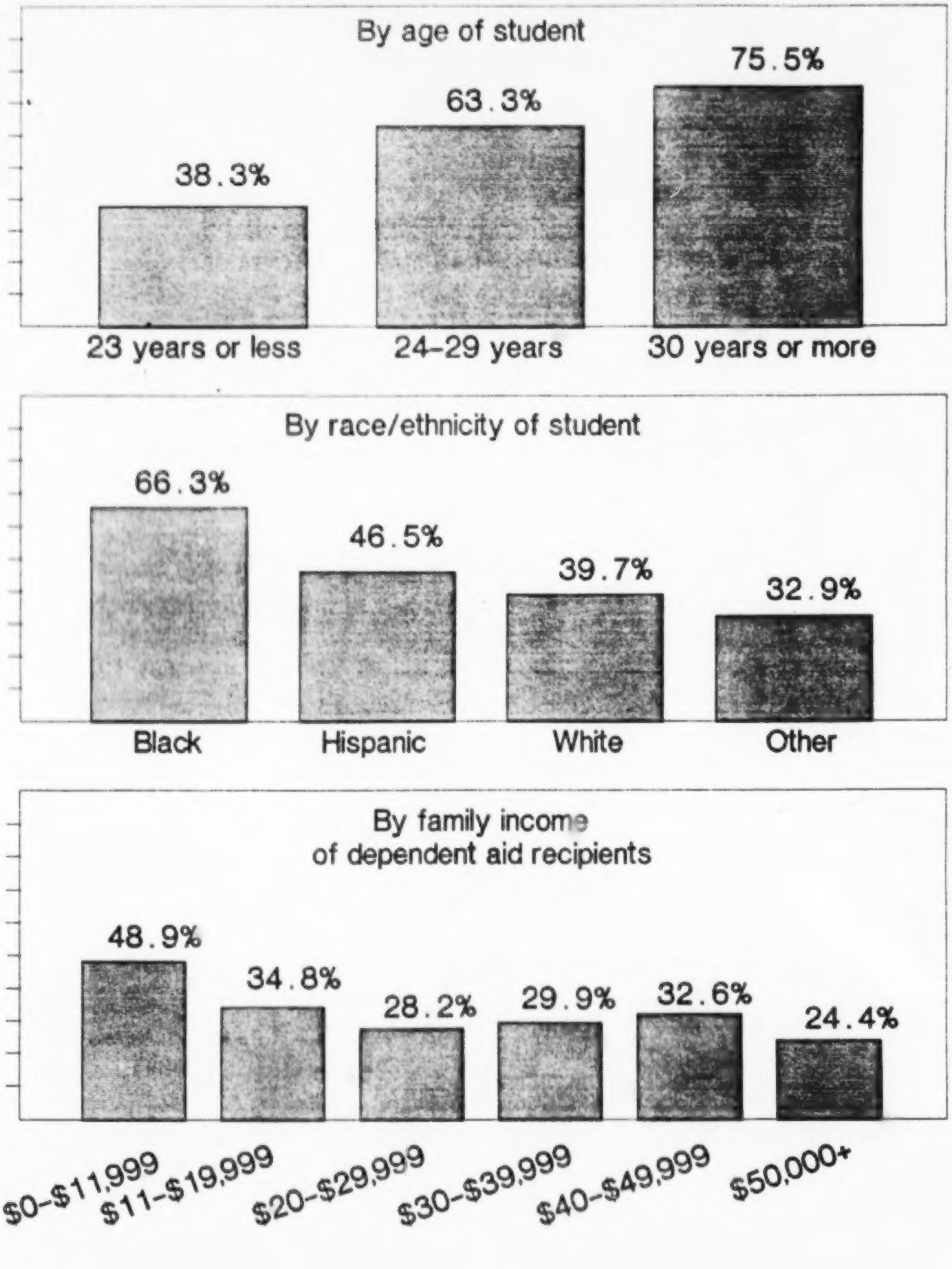


FIGURE 13

Full-time undergraduates employed for more than twenty hours per week during the academic year



SIXTH ANNUAL NASSGP/NCHELP RESEARCH NETWORK CONFERENCE
WASHINGTON, D.C.
JUNE 7-9, 1989

LIST OF PARTICIPANTS

Mary Averill, Institutional Research Coordinator, Harvard University
1350 Massachusetts Avenue, 458 Holyoke Ctr., Cambridge, MA 02138
(617) 495-3511

Donald L. Basch, Associate Professor of Economics, Simmons College, 300 The Fenway, Boston, MA 02115 (508) 358-2318

David Baumann, Reporter, Education Daily/Student Aid News, 1101 King Street, P. O. Box 1453, Alexandria, VA 22314 (703) 739-6414

David L. Bayless, Vice President, Westat, 1650 Research Blvd., Rockville, MD 20855 (301) 291-8283

Gary F. Beanblossom, Chief, Stafford Loan Program Analysis Section, U.S. Department of Education, Room 4310, ROB-3, Washington, DC 20202

Lutz K. Berkner, Associate Director/Research Coordinator, New Jersey Department of Higher Education, 4 Quakerbridge Plaza, CN 540, Trenton, NJ 08610 (609) 588-3225

James S. Biddle, Executive Director, Ohio Student Loan Commission, 309 S. Fourth St., P. O. Box 16610, Columbus, Ohio 43266-0610 (614) 466-3091

James L. Bowman, Executive Director, Scholarship and National Recognition Programs, Educational Testing Service (39N), Rosedale Road, Princeton, NJ 08559 (215) 750-8440

Jane Innis Caldwell, Director, Special Programs, Student Services Division, Texas Higher Education Coordinating Board, P. O. Box 12788, Capitol Station, Austin, TX 78711 (512) 462-6325

Dana Callihan, Administrative Assistant, California Student Aid Commission, 1515 S Street, North Building, 5th Floor, P. O. Box 942845, Sacramento, CA 94245-0845 (916) 322-6504

Reed L. Carpenter, Policy Analyst, Office of Student Financial Aid, University of Minnesota, 210 Fraser Hall, 106 Pleasant Street S.E., Minneapolis, MN 55455-0422 (612) 624-5831

Dennis Carroll, Chief, LSB, National Center for Education Statistics, 555 New Jersey Avenue, NW, Washington, DC 20208 (202) 357-6774

Dr. Stephen Chaikind, Chief Economist, Decision Resources Corp., 1828 L Street, NW, Washington, DC 20036 (202) 956-5916

George Chin, University Director, Student Financial Assistance, City University of New York, 101 West 31st Street, 7th Floor, New York, NY 10001 (212) 947-6000

Timothy A. Christensen, Assistant Director for Research and Marketing, National Association of Student Financial Aid Administrators, 1920 L Street NW, Suite 200, Washington, DC 20036 (202) 785-0453

John F. Corrozi, Executive Director, Delaware Postsecondary Education Commission, 820 North French Street, Fourth Floor, Wilmington, DE 19801

R. Alison Coventry, Manager, Marketing Research, Student Loan Marketing Association, Marketing Department, 1050 Thomas Jefferson Street, NW, Washington, DC 20007 (202) 298-2871

John K. Curtice, Director, Financial Aid Services, State University of New York, State University Plaza, F-109, Albany, NY 12246

Jerry S. Davis, Director, Research and Policy Analysis, Pennsylvania Higher Education Assistance Agency, 660 Boas Street, Harrisburg, PA 17102 (717) 257-2794

Michael T. Errecart, Vice-President, Macro Systems, Inc. 126 College Street, Burlington, VT 05401 (802) 863-9600

Deborah Fahle, Policy Specialist, Texas Guaranteed Student Loan Corporation, 1609 Centre Creek Drive, Austin, TX 78761 (512) 835-1900

Martha Fitzgerald, 730 Putnam Blvd., Wallingford, PA 19086 (215) 874-8953

Charlotte Fraas, Specialist in Social Legislation, Congressional Research Service, Library of Congress, Madison LM 320, Washington, DC 20540 (202) 707-5860

Carol Frances, Carol Frances and Associates, Route 1, Box 58, Broad Run, VA 22014

Ernest T. Freeman, President, The Education Resources Institute, 330 Stuart Street, Suite 300, Boston, MA 02116-5237

Dave Garner, Compliance Division Manager, Student Loan Foundation of Arkansas, 219 S. Victory, Little Rock, AR 72201 (501) 372-1491

Michael Gerber, Vice-President, Maryland Independent College and University Association, 208 Duke of Gloucester Street, Annapolis, MD 21401 (301) 269-0306

Laura L. Greene, Research Associate, Pennsylvania Higher Education Assistance Agency, 600 Boas Street, Harrisburg, PA 17102 (717) 257-2794

Tricia Grimes, Research Analyst, Minnesota Higher Education Coordinating Board, Suite 400, Capitol Square Building, 550 Cedar Street, St. Paul, MN 55101 (612) 296-9582

Lyn Hammond, Executive Assistant, State Education Assistance Authority, 6 N. 6th Street, Suite 300, Richmond, VA 23219 (804) 786-2035

Janet S. Hansen, Director for Policy Analysis, The College Board, 1717 Massachusetts Avenue, NW, #404, Washington, DC 20036 (202) 332-7134

Martin Harding, Research Associate, Higher Education Coordinating Board, 917 Lakeridge Way, GV-11, Olympia, WA (206) 586-2225

Sharon Hart, Financial Analyst, Colorado Commission on Higher Education, 1300 Broadway, Second Floor, Denver, CO 80203 (303) 866-2723

Arthur Hauptman, Consultant, Office of Governmental Relations, American Council on Education, One Dupont Circle, NW, Suite 824, Washington, DC 20036

Robert M. Hauser, Professor of Sociology, Center for Demography and Ecology, University of Wisconsin, Madison, WI 53706

Donald E. Hills, Research Manager, California Student Aid Commission, P.O. Box 942845, Sacramento, CA 94245-0001 (916) 322-5112

Janet C. Hunter-Holmes, Director of Financial Aid, Knox College, Financial Aid Office, Box K-156, Galesburg, IL 61401 (309) 343-0112 Ext. 131

Clifford M. Johnson, Director of Youth Employment, Children's Defense Fund, 1222 C Street, NW, Washington, DC 20001

Marilyn Sango-Jordan, Statistical Consultant, JBL Associates, Box 442, 217 16th Street, Watervliet, NY 12189 (518) 273-8144

Deborah Kalcevic, Analyst, Congressional Budget Office, House Annex 1, Room 431, Washington, DC 20515 (202) 226-2820

Joseph Kane, Vice-President, Association of Jesuit Colleges and Universities, 1424 16th Street, NW, #300, Washington, DC 20036 (202) 667-3889

Steven D. Klein, Assistant Commissioner, Student Financial Aid, Missouri Coordinating Board for Higher Education, 101 Adams Street, Jefferson City, MO 65101 (314) 751-2361

Karl Knapp, Assistant for Research and Policy Analysis, National Association of Student Financial Aid Administrators, 1920 L Street, NW, Suite 200, Washington, DC 20036 (202) 785-0453

Paula Knepper, National Center for Education Statistics, U.S. Department of Education, Washington, DC 20208-5652

Roslyn Korb, Senior Statistician, National Center for Education Statistics, 555 New Jersey Avenue, NW, Washington, DC 20208 (202) 626-9035

Christine E. Larger, Assistant Director, Public Policy, National Association of College & University Business Officers, Suite 500, One Dupont Circle, Washington, DC 20036 (202) 861-2540

Daniel T. Layzell, Assistant Director, Fiscal Affairs, Illinois Board of Higher Education, 500 Reisch Building, 4 West Old Capitol Square, Springfield, IL 62701 (217) 782-3632

Cindy Lee (Ching-Ching Tang), Program Officer for Research, Department of Higher Education, Grants & Scholarships, State of New Jersey, 4 Quakerbridge Plaza, CN 540, Trenton, NJ 08625 (609) 588-3592

John Lee, President, JBL Associates, 4606 Davidson Drive, Chevy Chase, MD 20815 (301) 654-5154

Gwendolyn L. Lewis, Senior Policy Analyst, The College Board, 1717 Massachusetts Avenue, NW, Suite 404, Washington, DC 20036 (202) 332-7134

Andrea Lintott, Program Analyst, Department of Education, Room 4039, 400 Maryland Avenue, SW, FOB-6, Washington, DC 20202 (202) 732-4667

R. Scott Lodder, Research Analyst, State Education Assistance Authority, 6 N. 6th Street, Suite 300, Richmond, VA 23219, (804) 786-2035

James Malloy, Associate Director, Financial Aid, University of Notre Dame, Notre Dame, IN 46556 (219) 239-6436

Anne R. Manley, Program Analyst, Department of Education, 400 Maryland Avenue, SW, Washington, DC 20202 (202) 732-4675

Thomas J. McCord, Bureau Chief, Bureau of Postsecondary Research and Information Systems, New York State Education Department, Room 5B44 CEC, Albany, NY 12230 (518) 474-5091

Sean M. McHugh, Corporate Research Analyst, Nellie Mae, 50 Braintree Hill Park, Braintree, MA 02184 (617) 849-1325

Maureen McLaughlin, Division Director, U.S. Department of Education, FOB 6, Room 3127, 400 Maryland Avenue, S.W., Washington, DC 20815 (202) 732-3682

Jamie P. Merisotis, Consultant, 1625 K Street, NW, Suite 200, Washington, DC 20006 (202) 857-0670

Richard C. Michel, Director, Incomes and Benefits Policy Center, The Urban Institute, 2100 M Street, NW, Washington, DC 20037 (202) 857-8655

Thomas G. Mortenson, Senior Research Associate, American College Testing Program, P.O. Box 168, Iowa City, IA 52243 (319) 337-1468

Karen F. Myers, Program Administrator, Tennessee Student Assistance Corporation, 404 James Robertson Parkway, Suite 1950, Nashville, TN 37219 (615) 741-1346

Jay Noell, Analyst, Congressional Budget Office, House Annex #2, Second & D Streets, SW, Washington, DC 20515 (202) 226-2672

Arlene Olinsky, Program Research Specialist, New York State Higher Education Services Corporation, 99 Washington Avenue, Albany, NY 12255 (518) 473-8446

Michael P. O'Malley, Andrew E. Mellon Fellow, Williams College, Fernold House, Williamstown, MA 01267, (413) 597-2476

Shirley A. Ort, Deputy Director for Student Financial Aid & Government Relations, Washington Higher Education Coordinating Board, 917 Lakeridge Way, Mail Stop GV-11, Olympia, WA 98504 (206) 753-3571

Thomas D. Parker, Treasurer, The Education Resources Institute, 330 Stuart Street, Suite 500, Boston, MA 02116 (617) 426-0681

Marilyn Pedalino, Director of Planning and Research, Massachusetts Higher Education Assistance Corporation, 330 Stuart Street, Boston, MA 02116 (617) 728-4515

Samuel S. Peng, Division Director, National Center for Education Statistics, 555 New Jersey Avenue, NW, Washington, DC 20208 (202) 357-6354

D. Lee Peterson, Supervisor, Support Services Unit, Student Financial Assistance Services, Michigan Department of Education, P.O. Box 30008, Lansing, MI 48909 (517) 373-0457

Alice E. Presson, Research Assistant, University of Virginia, 209 Garrett Hall, Charlottesville, VA 22903 (804) 924-3371

James B. Preus, Coordinator, University of Minnesota, 260 Williamson Hall, 231 Pillsbury Drive SE, Minneapolis, MN 55455 (612) 625-2344

Sheila Pruden, Director of Research, Illinois State Scholarship Commission, 500 West Monroe, 3rd Floor, Springfield, IL 62701 (217) 782-2449

Blanca Rosa Rodriguez, Program Analyst, Stafford Loan Program. U.S. Department of Education, Room 4310, ROB-3, Washington, DC 20202

Laurent Ross, Research Associate, American Council on Education, One Dupont Circle, NW, #835, Washington, DC 20036 (202) 939-9355

Glenwood Rowse, Associate in Higher Education, New York State Education Department, 5B44 CEC, Albany, NY 12230 (518) 474-5091

Alton W. Royal, Director of Student Financial Aid, Florida A & M University, P.O. Box 812, Tallahassee, FL 32307 (904) 599-3730

Pedro Saavedra, Technical Director, Macro Systems, Inc., 8630 Fenton Street, Suite 300, Silver Spring, MD 20910 (301) 588-5484

Diane L. Saunders, Assistant Vice-President, Communications and Public Affairs, Nellie Mae, 50 Braintree Hill Park, Suite 300, Braintree, MA 02184 (617)849-1325

Margot A. Schenet, Specialist in Social Legislation, Education and Public Welfare Division, Congressional Research Service, Library of Congress, Madison Building, Room 320, Washington, DC 20540 (202) 707-5860

Nancy A. Willie-Schiff, Assistant in Higher Education, New York State Education Department, 5B44 CEC, Albany, NY 12230 (518) 474-5091

Carl Schmitt, National Center for Education Statistics, U. S. Department of Education, Washington, DC 20208-5652

Saul Schwartz, Associate Professor, Tufts University, Department of Economics, Medford, MA 02155

Fred H. Sellers, Chief, State Student Incentive Grant Section, U.S. Department of Education, Washington, DC 20202

Elvira Senese, Assistant to the Director for Program Analysis & Development, Office of Student Financial Assistance, City University of New York, 101 West 31st Street, 7th Floor, New York, NY 10001 (212) 947-6000, Ext. 333

Gerald Setter, Higher Education Coordinating Board, 400 Capitol Square, 550 Cedar Street, St. Paul, MN 55110 (612) 296-9680

Paul M. Siegel, Chief, Education and Social Stratification Branch, Bureau of the Census, Washington, DC 20233

Patricia Smith, Director of Legislative Analysis, American Council on Education, One Dupont Circle, NW, #835, Washington, DC 20036 (202) 939-9355

Irving L. Spar, Ph.D., Coordinator of Financial Aid, University of Rochester School of Medicine and Dentistry, 601 Elmwood Avenue, Box 601, Rochester, NY 14642 (716) 275-3905

David E. Sprenkle, Director of Financial Aid, Black Hawk College, 6600 34th Avenue, Moline, IL 61263 (309) 796-0156

Dawn Geronimo Terkla, Director, Institutional Planning, Tufts University, 28 Sawyer Avenue, Medford, MA 02155 (617) 381-3274

Dr. Julianne S. Thrift, Senior Vice-President, National Institute of Independent Colleges & Universities, 122 C Street, NW, Suite 750, Washington, DC 20001

Dr. Michael L. Tierney, Associate Dean, Graduate School of Education, University of Pennsylvania, 3700 Walnut Street, Philadelphia, PA 19104

Micheileen J. Treadwell, Director of Admissions and Enrollment Planning, State University of New York at Albany, 1400 Washington Avenue, Albany, NY 12222 (518) 442-5443

Linda Waltie, Program Statistician/Analyst, Washington Student Loan Guaranty Association, 500 Colman Building, 811 First Avenue, Seattle, WA 98104 (206) 625-1283

Donna S. Watson, Assistant Vice-President, Citibank, Student Loan Business, 99 Garnsey Road, Pittsford, NY (716) 248-7127

Jeff J. Webster, Research Analyst, Texas Guaranteed Student Loan Corporation, P. O. Box 15996, Austin, TX 78761 (512) 835-1900

Christine L. Wuest, Research and Information Specialist, Student Loan Funding Corporation, 414 Walnut Street, #550, Cincinnati, OH 45202 (513) 241-9004

Brian J. Zucker, Vice-President, Research and Policy Development, Minnesota Private College Council, Suite 560, 400 Sibley, St. Paul, MN 55101 (612) 228-9061